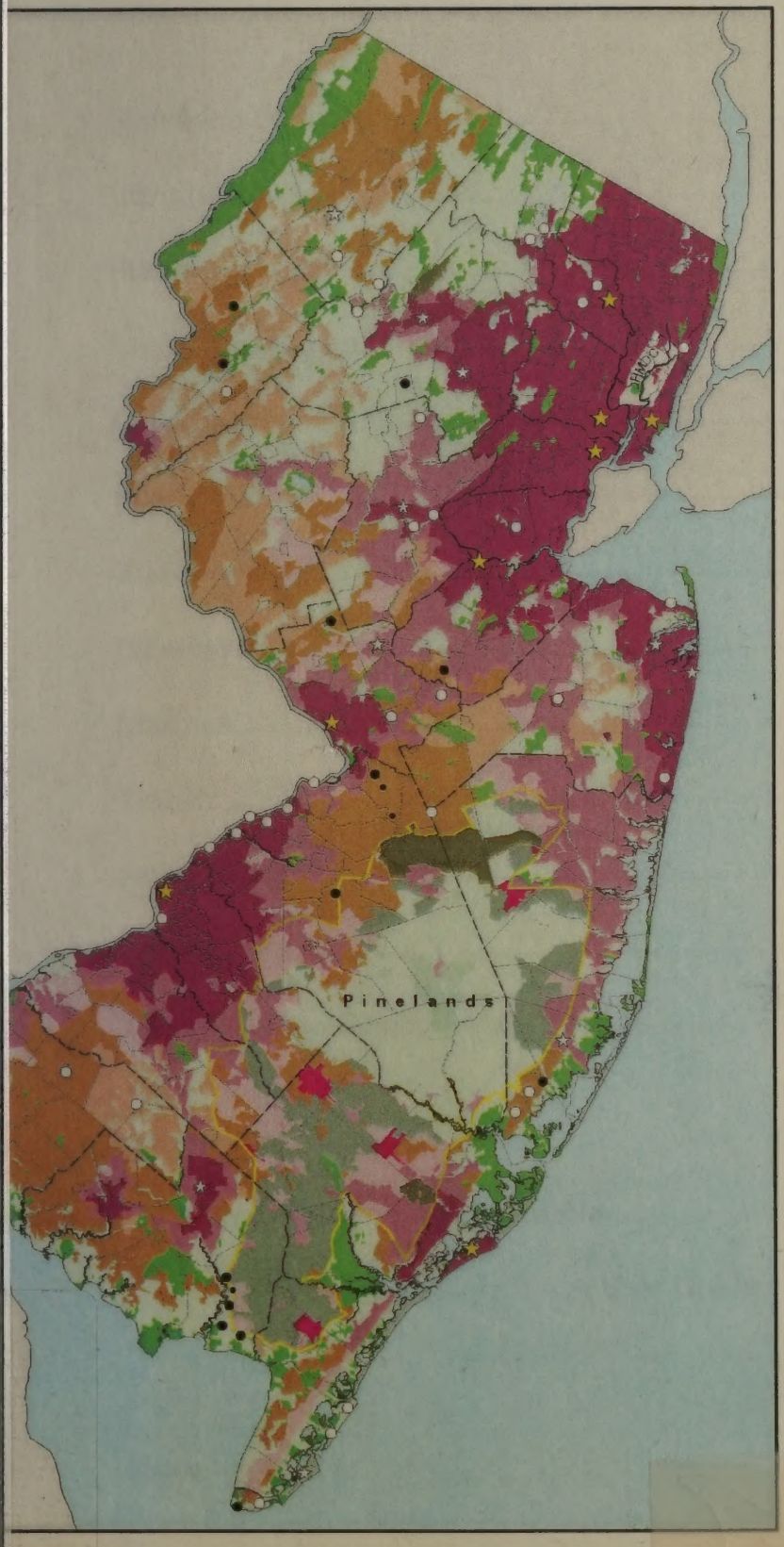

The Model Municipal Circulation Element

DEPARTMENT OF TRANSPORTATION
THE STATE OF NEW JERSEY

THE MODEL MUNICIPAL CIRCULATION ELEMENT

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The Model Municipal Circulation Element For Anytown

The Purpose Of This Product:

To have a user friendly transportation planning methodology that enables all local jurisdictions to participate in the State Development and Redevelopment Plan endorsement program

The Office of State Planning (OSP) and the New Jersey Department of Transportation (NJDOT) are embarking on a statewide program of encouraging municipal and regional jurisdictions to develop comprehensive plans in accordance with the principles of the State Development and Redevelopment Plan (SDRP). The NJDOT desires to strengthen its role in implementing the SDRP by aiding municipalities in preparing circulation elements for their master plans that reflect the goals and objectives of the SDRP.

A number of good "How-To" transportation documents have already been created to help local communities produce/develop better master plans. The goal of these products was to help municipalities create plans that are more encompassing and consistent with state goals and objectives. Some communities have used these products but many more have not. Therefore, the question that begs to be asked is how do you get volunteer planning boards to use products that are created to help them?

Local planning boards are made up of volunteer members who may or may not have any knowledge of planning issues, the SDRP, NJDOT transportation goals, etc. Since these boards may not have in-house professional planning assistance it makes the task of creating or revising a master plan even more daunting. This is especially true given the fact that most planning boards focus primarily on review of subdivisions, site plans and the actual hearings of these plans. It would not be too far of a stretch to assume that the average planning board member knows more about the legal requirements of a planning board hearing than they know about their own master plan and how it relates to zoning ordinances and, subsequently, to any given site plan.

Given the reality of how planning boards work in New Jersey, an idea was formulated to create a "Model" circulation element that could be used for any community. Since no one should be required to "reinvent the wheel", the primary goal of this project is to provide guidance and show communities exactly what a circulation element should look like to be consistent with the

SDRP. In effect if you can produce a circulation element that is more consistent with the state plan you would be meeting the goals and objectives of the SDRP.

Typically, when communities create a new master plan or update existing plans they either hire a consultant or use in-house staff. Since there is no reason to create a brand new process when creating this document, a professional usually performs research to see what other communities have done and determine if it would apply in their own community. A common practice in the profession is to gather "good" master plans. This helps the professional to know what is now "state of the practice" in master plans. Since this is a procedure that is used in all professions (not just planning) a volunteer planning board member should be able to understand and use a model plan or document.

For this project, a model circulation plan was created that could be used as a template for any community in New Jersey. This model plan reads as if the community is real. The plan covers all aspects of circulation planning that could or should be addressed in any community in New Jersey. A community can pick and choose what would be appropriate for them and their master plan. There are maps, traffic counts, transit data and routes, basically everything that should be in a model circulation element.

The layout in this model master plan will also give the user a background on how-to perform tasks necessary for its completion. Certain areas have how-to portions that give the user ways to perform a certain task from the most economical way to the more comprehensive/expensive methods. For example, for any portion of a circulation element you could either hire a consultant, have existing staff do it or you could use volunteer help. This is especially true for basic inventories of existing transportation facilities, such as sidewalks.

The intent of this model is that it can be used as a boilerplate and/or guidance for any community's circulation element. This model can also be used by a community to ascertain what their current plan is lacking and how it can be improved. With this guidance, a community will be better equipped to meet the principles that are necessary to achieve consistency with the State Plan and other transportation plans.

Remember, a good comprehensive plan will always be consistent with the State Plan! Good luck with your master plan and most importantly have fun! This should not be boring!

(town logo should go here)

TOWN OF _____

MASTER PLAN:
CIRCULATION PLAN ELEMENT
_____ *(year)*

INTRODUCTION

This Circulation Plan Element has been prepared in accordance with N.J.S.A. 40:55D-28 b.(4) of the Municipal Land Use Law which states that such a plan element should indicate "the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about, and through the municipality, taking into account the functional highway classification system of the Federal Highway Administration and the types, locations, conditions and availability of existing and proposed transportation facilities, including air, water, road, and rail".

This Circulation Plan Element was prepared in conjunction with the New Jersey Department of Transportation Statewide Transportation Improvement Program (STIP), the New Jersey_State Development and Redevelopment Plan (SDRP), the _____ County Master Plan, and the _____ (year) Land Use Plan for the Town of _____.

(List any other reports, plans or updates used to prepare the Circulation Element, such as the "Pinelands Comprehensive Management Plan", plans for the Coastal Areas or the Hackensack Meadowlands, or other relevant studies or reports prepared by the State, County, or Municipal Planning Organization.)

Additionally, a number of prior traffic studies prepared by the Town of _____ were considered during the preparation of this document including the following:

- The Town of _____ (*year of previous plan*) Circulation Plan Element
- The _____ Road Corridor Study
- The _____Road Commercial District Study
- The Guidelines for the _____ Corridor

The basic purpose of this Circulation Plan Element of the Master Plan is to evaluate the traffic circulation system of the Town of _____, identify areas of concern, and recommend the general design standards for the roadways, pathways, sidewalks, railways, and other transportation facilities within our borders.

STATEMENT OF GOALS AND OBJECTIVES

(The following is typical for any master plan to have listed and is taken from the municipal land use law)

The Municipal Land Use Law, enacted by the State Legislature on January 14, 1976, empowers municipal governments with the right to control the physical development of the lands within their bounds. N.J.S.A. 40:55D-2 of the Municipal Land Use Law, as amended through the 1993 legislative session, lists fifteen (15) general purposes regarding the local planning process, ten (10) of which are relevant to transportation circulation planning and are in bold as follows:

1. **To encourage municipal action to guide the appropriate use or development of all lands in this State, in a manner which will promote the public health, safety, morals, and general welfare;**
2. To secure safety from fire, flood, panic and other natural and man-made disasters;
3. To provide adequate light, air and open space;
4. **To ensure that the development of individual municipalities does not conflict with the development and general welfare of neighboring municipalities, the county and the State as a whole;**
5. **To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment;**
6. **To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies;**
7. To provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens;
8. **To encourage the location and design of transportation routes which will promote the free flow of traffic while discouraging location of such facilities and routes, which result in congestion and blight.**
9. **To promote a desirable visual environment through creative development techniques and good civic design and arrangements.**
10. **To promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources in the State and to prevent urban sprawl and degradation of the environment through improper use of land.**
11. **To encourage planned unit developments which incorporate the best features of design and relate the type, design and layout of residential, commercial, industrial and recreational development to the particular site;**
12. **To encourage senior citizen community housing construction;**

13. **To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more efficient use of land;**
14. To promote utilization of renewable energy resources; and
15. To promote the maximum practicable recovery and recycling of recyclable materials from municipal solid waste through the use of planning practices designed to incorporate the State Recycling Plan goals and to complement municipal recycling programs.

These goals, with the exception of #8, if followed should bring every community into consistency with the State Plan. Goal #8 could actually create suburban sprawl, speeding and increased infrastructure costs if followed. It should changed to read as follows:

> **To encourage the location and design of transportation routes which will promote the free flow of persons and goods while discouraging the location of such facilities and routes that only focus on one mode of transportation to the detriment of all other modes.**

This statement is more in keeping with the current state of transportation planning that is promoted both by federal and state law.

Consistent with these general purposes of the Municipal Land Use Law, which the Town of _____ embraces, the Town has extrapolated certain specific goals for its transportation circulation planning as follows:

The goals of the community should be general in nature and should be formulated through a public process.

Goal Type: Quality of Life

- Ensure that the Town of _____ transportation services are safe and readily accessible to all members of our community.

Goal Type: Land Use/Transportation Connection

- Land use and transportation planning in the Town of _____ should occur together. Impact assessments and build-out analyses should be utilized to determine the effect of land use plans on the movement of goods and people.

Goal Type: Zoning Analysis

- Any increases or decreases in land use zones within the Town of _____ should have a build-out analysis performed prior to the adoption of the new standard.

Goal Type: Transit and Zoning

- Land use densities in the Town of _____ that are within close proximity to the mass transit stop(s) should be reviewed for possible increases and changes of use to allow for a diversity of uses (retail, office, residential).

Goal Type: Resource Management

- All types of transportation infrastructure and services (walking, bicycling, ride sharing, etc.) in the Town of _____ will be promoted and enhanced to the fullest prior to pursing capacity increasing projects.

Goal Type: Design & Safety

- All of the transportation infrastructure within the Town of _____ should be designed and constructed with the minimum improvements necessary to provide safe movement of people and goods.

Goal Type: Traffic Calming

- In order to control the appropriate speed limit on streets throughout the Town of _____ the three "E's" should always be applied equally; Enforcement, Education and Engineering (design).

Goal Type: Road Classification

- To the extent possible and appropriate, the roadways in the Town of _____ designated to handle the largest volumes of traffic (i.e., the arterials and major collectors) should be those under the jurisdiction of the State of New Jersey and _____ County.

Goal Type: Transit

- The Town of _____ should work closely with the transit agencies in order to improve and increase service for our residents.

Goal Type: Goods Movement

- The Town of _____ should encourage the free flow of goods on the appropriate streets and rail corridors.

Goal Type: New/More Options

- The Town of _____ should strive to provide its citizens with more choices that provide linkages to places that they need and want to go (multi-use trails, jitneys, etc.).

The **Statewide Policy** section that follows is included to outline the elements of the *New Jersey State Development and Redevelopment Plan* (SDRP) with which this circulation element seeks to achieve consistency. It is intended to serve an "overview" purpose, as you embark on this circulation planning effort. You may find that some policies do not apply to your community; these policies should be skipped, but you will probably find that the majority of them apply in one way or another. Those policies that are particularly important or relevant in your town should be highlighted. Website and contact information is also included to provide greater insight into the *State Development and Redevelopment Plan*, as well as the efforts of the Office of State Planning and State Planning Commission.

The Model Municipal Circulation Element

The Office of State Planning (OSP) in the Department of Community Affairs staffs the New Jersey State Planning Commission and the New Jersey Brownfields Task Force. Through the New Jersey State Development and Redevelopment Plan (SDRP), the OSP works to improve the efficiency and reduce the costs of land development and infrastructure in New Jersey by expanding areas of coordination and cooperation among State and local agencies.

The SDRP was adopted in 1992 by the New Jersey State Planning Commission and is periodically reviewed and revised. This plan evolved over six years of dialogue and negotiations among the Commission, municipalities, counties, State agencies, organized interest groups, and citizen activists through a formal process known as "Cross-Acceptance", and is examined prior to its adoption through an impact assessment of its policies and provisions. The SDRP reflects a consensus about how New Jerseyans can best manage new development to preserve our natural resources and protect our economic vitality. It is, in effect, an investment prospectus for State agencies that can be used to support local planning goals and regulatory processes throughout government.

The greatest benefit of using the SDRP is as a vehicle for coordinating the plans and programs of each level of government, and for providing a measure of predictability to local governments and private development interests. By striving to achieve its goals, we can enhance to quality and character of where we work, live, and play.

The SDRP is a tool to invigorate local control over the ways in which development, redevelopment, conservation, and other land use issues are decided. State agencies are incorporating the Plan into their own planning and decision-making processes. The SDRP can support localities as they seek to influence the way discretionary dollars made available by State agencies are allocated. While planning is a continuing process that is often constrained by limited fiscal resources, the costs of unplanned growth are great and often compound local fiscal problems. As a result of its continuing support of interagency and local planning efforts, the SDRP promises to save taxpayers billions of dollars over the next 20 years.

The essential elements of the Statewide Policies for Transportation set forth in the SDRP are as follows:

> [To] improve transportation systems by coordinating transportation and land use planning; integrating transportation systems; developing and enhancing alternative modes of transportation; improving management structures and techniques; and utilizing transportation as an economic development tool. (p. 122)

Specifically relating to transportation in the Town of _____ are the following Statewide Policies that appear on pages 122 through 127 of the Draft Final SDRP, dated October 25, 2000 *(choose policies that are relevant to your town):*

- Policy 1. System Preservation
- Policy 2. Public Transportation Priorities
- Policy 3. Coordination of Transportation Planning Among Public, Quasi-Public, and Private Agencies.
- Policy 4. Integration of Land Use and Transportation Planning
- Policy 5. Transportation and Natural Resource Protection
- Policy 6. Transportation and Air Quality
- Policy 7. Transportation and Energy Conservation
- Policy 8. Transportation and Aesthetics
- Policy 9. Transportation and Context Sensitive Design
- Policy 10. Unused and Abandoned Transportation Rights-of-Way
- Policy 11. Aviation Facilities
- Policy 12. Transportation Systems Integration
- Policy 13. Mobility and Access
- Policy 14. Efficient Utilization of Capacity
- Policy 15. Provision of Public Transportation Services
- Policy 16. Transportation Demand Management Strategies
- Policy 17. Transportation Supply Management Strategies
- Policy 18. Highway Access Management
- Policy 19. Regional and Local Traffic Patterns
- Policy 20. Transportation Planning as a Redevelopment and Development Tool
- Policy 21. Labor Markets
- Policy 22. Recreational and Tourism Travel
- Policy 23. Goods Movement
- Policy 24. Traffic Calming
- Planning Area ___. *(list all planning areas that apply to your town)*

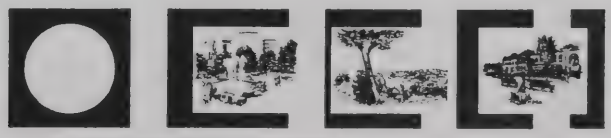
The policies stated in SDRP relating to transportation have been considered and incorporated into the formulation of this Circulation Plan Element. Further

information on the OSP and the SDRP can be found at http://www.state.nj.us/osp/osphome.htm.

Sources:

State planning information can be obtained by contacting the Office of State Planning at (609) 292-7156, or through review of the New Jersey State Development and Redevelopment Plan. Your County Department of Planning or County Planning Board may also be a source of useful information, as the County plays a liaison role between State agencies and its constituent municipalities, and coordinates planning efforts throughout the Cross-Acceptance process.

The **Local Planning** section that follows intends to walk you through the basic planning efforts that should be undertaken to lay the groundwork for any circulation element. It investigates local policy and initiatives to determine what plans and ordinances are already in place, what new directions may be underway, and what a community's character and vision for the future may be. A model "build-out" analysis is included to help determine the maximum amount of development that a community might experience under the current zoning ordinance. Development patterns and land uses are assessed, as are the population, employment, and households tied to these land use characteristics. Finally, tripmaking and travel patterns generated by these people, jobs, and land uses will be described, to lay the groundwork for later discussion of the different ways in which people and goods travel and the facilities and services geared toward meeting these travel needs.



The Model Municipal Circulation Element

The Town of _____'s Master Plan was updated on _____*(date)*, and the Zoning Ordinance on _____*(date)*. *(Here, comment on past and current master plans and the zoning ordinance, how they have manifested themselves in development patterns, how they have impacted transportation infrastructure and services, how this initiative is updating or breaking from the older circulation element, etc.)*

The Master Plan addresses (or Zoning Ordinance provides for) mixed use centers, higher residential densities, redevelopment, growth management, and clustering of employment, all of which can help to reduce congestion by centralizing activities, enhancing densities of population and employment that support transit service, enhancing the feasibility of pedestrian and bicycle trips, reducing reliance upon the automobile, and changing the nature and number of trips people are taking.

A number of local agencies have been put in place as a result of *planning/zoning/development* concerns, and the actions of these agencies may have an impact on community circulation. For example, the Town of _____ initiated a Historic Resources Survey in the _____ *(year)*, and subsequently assembled a Local Historic Preservation Board. This Board has taken steps to preserve the character of neighborhoods of historic significance, such as the _____ Street commercial district, as well as a number of historic bridges across the _____ Brook – initiatives that may impact planning for local circulation. The Town has also recently created an Economic Development Commission whose charge is to strategically and effectively direct new investment into the community – at appropriate locations – while preserving and enhancing rapport between the community and established businesses and investors. Transportation concerns arising out of the activities of this Commission include the questions: where is investment being directed, and what are the impacts of new development and redevelopment on overall community transportation? As such, these agencies (and others like them) should be included in any transportation planning and decision-making that their initiatives may impact.

Build-Out Analysis

A build-out analysis is used to determine the maximum amount of development that could occur within the Town of _____, under the current zoning ordinance. The steps necessary for a build-out analysis are as follows:

1. ***Conduct an inventory of existing land uses in order to determine the amount of land within the Town available for development or redevelopment.*** If an existing land use map has been prepared for past planning efforts, this can be reviewed relative to any project that been built since. Recent projects can be determined by assessing applications

that have been reviewed (or are currently up for review) before the Planning Board or Land Development Review staff. Often times, Land Development Review staff can help to identify the location and extent of vacant parcels in a particular locality. If your town (or greater area of which it is a part) has an economic development authority or similar agency entrenched in development interests, you can check to see which sites are primed for development and/or redevelopment.

2. ***Determine how developable land is zoned.*** This can be accomplished through review of your local zoning ordinance and maps.
3. ***Consider any potential impediments to (or opportunities that foster) build-out.*** Determine factors that affect build-out, such as economic challenges and opportunities, environmental impacts, etc. How might these factors limit or encourage future development? Economic challenges and opportunities might include, for example, contaminated sites and "Brownfields" (see http://www.state.nj.us/osp/brownfld/bftaskf.htm for more information on Brownfields redevelopment). Environmental impacts to consider might include the effects of development on wetlands and unique habitats (see the New Jersey Department of Environmental Protection website http://www.state.nj.us/dep/ for more information).
4. ***Determine the potential infrastructure and services needed to support the maximum build-out scenarios.*** These include civic, recreational, transportation, sewer, water, schools, services (police, fire, medical), and community facilities. For example, if a vacant plot of land is developed as a multifamily residential complex, what will be the impact of the anticipated number of new residents on community infrastructure, services, and facilities? Professional planners often have resources and/or experience in the types of impact analyses (fiscal, traffic, environmental, etc.) that may be employed to estimate potential impacts of build-out (including basic "rule-of-thumb" approaches such as cost per new resident, trips generated per new employee, etc.). If staff time, resources, and/or expertise will not permit such analysis, you may wish to hire a consultant that specializes in this area.
5. ***Determine the appropriate placement and proximity of potential infrastructure to various land use types.*** Here, one must consider whether new infrastructure will be serving development (both in-place and coming online) as needed, and fostering the orderly and appropriate placement of future development. Compare the location of current and anticipated infrastructure against your local zoning and land use maps. This will give a clearer picture of where infrastructure is in place to serve new development, and where new infrastructure costs must be incurred. For example, where should sewers be placed to support the appropriate density of residential development? Are sidewalks in place or proposed to provide connectivity between residential neighborhoods and commercial districts (and other activity centers)? Are proposed highway

and railroad facilities placed appropriately relative to lands zoned for industrial development, and is this transportation infrastructure designed as necessary to support goods movement and other traffic generated by these sites? This type of review may also help to identify spots where rezoning must take place in order to utilize existing resources and keep infrastructure costs down.

Once the above information is collected and analyzed, policy makers can determine if current zoning ordinances are appropriate for the Town of _____, or if they permit more development than infrastructure can and should handle.

Sources:

Local policy and planning information can be obtained through review of municipal and county master plans, companion documents and updated elements, and zoning, site plan, and subdivision ordinances. It may also be helpful to tap into the expertise of a Municipal Planner, Division of Land Development Review, Local and County Planning Boards, and other relevant local agencies. These officials can also provide critical insight into a community's self-image and vision for its future.

Development Patterns

In this section, address community character, current land use patterns, municipal land use breakdowns (acreage), and notable land use trends (by reviewing the character of applications up for review before the Board, etc.).

The Town of _____ is primarily a residential community, with a small-scale commercial core along _____ Street and some industrial activities along the _____ Railroad. Residential development here tends toward _____-density, with some _____-density residential interspersed in the _____ area.

Table XX. Land Use in the Town of _____

	Acreage	Percentage
Total Acres	7,856	100.0
Residential	4,796	61.0
Low-Density	3,083	39.2
Medium-Density	1,511	19.2
High-Density	202	2.6
Commercial	597	7.6
Office	104	1.3
Retail	493	6.3
Industrial	817	10.4

Transportation	306	3.9
Utilities	107	1.4
Open Space	495	6.3
Agriculture	0	0.0
Forest	421	5.4
Wetlands	317	4.0

Discussion Examples:

- According to the applications coming before the *Municipal Planner/Division of Land Development Review/Planning Board*, there is a notable thrust toward new commercial development along Route _____ at the outskirts of town, and a large-scale condominium development envisioned for _____ Road. These new developments are *consistent/inconsistent* with current zoning and master plan policies.

- Big-box wholesale distribution and warehouse retail development is also beginning to stake a claim in this area, with the new _____ outlet located just outside town on Route _____, and applications from _____, _____, and _____ (*names of companies/applicants*) coming before the Board over the course of the past year.

- Brownfields redevelopment opportunities on the site of the old _____ factory are currently under investigation. The current vision for projects on this site include a new shopping center and various distribution facilities, given the site's excellent location relative to highway, transit, and freight railroad facilities.

Sources:

Information on current land uses and development trends can be determined through review of municipal and county master plans, companion documents and updated elements, and zoning, site plan, and subdivision ordinances. It may also be helpful to tap into the expertise of a Municipal Planner, Division of Land Development Review, Local and County Planning Boards, and other relevant local agencies. These officials can also provide critical insight into a community's self-image and vision for its future.

Demographic and Economic Trends

In order to fully assess the nature of circulation in the Town of _____, it is important to assess various demographic and economic trends and characteristics, with particular attention to population, households, housing stock, and employment. These trends affect the character and intensity of tripmaking, and consequently impact the transportation network in various ways.

Table XX. Demographic and Economic Trends
Town of _____, 1980 - 2000

	1980	1990	2000
Population	6,593	6,528	6,637
Households	2,414	2,479	2,609
Housing Units	2,476	2,496	2,679
Employment	1,178	1,381	1,405
People per Household	2.73	2.63	2.54
Jobs per 1,000 Residents	179	211	212

Discussion Examples:

- While population in urban centers statewide has decreased substantially over the past 10 years, the population in _____ has remained steady, with a slight loss between 1980 and 1990, and an estimated gain of 100 residents by 2000. The town has witnessed notable reinvestment in its housing stock, and stability among residents in the northern precincts.

- Since 1990, the number of households in _____ has increased only slightly, rising 5 percent over the course of the decade. However, the number of people per household continues its downward trend – translating into a smaller household size over a greater span of households. In addition, out of all residential classes single-family housing stock has shown the largest increase, accounting for 155 of the 183 new units constructed over the past ten years.

- The 1980s marked a time of greater investment in the employment arena within the Town of _____, and this can be noted in the town's growth in employment over this period (200 jobs). This was coupled with a leveling of the population growth trend of previous years (with an overall loss of 65 residents). The following decade, however, was marked by relative stability in both population and employment. The number of households and housing units constructed, however, continued to grow over this same period.

- Overall employment has remained steady in the Town of _____ since the preparation of the last Master Plan, but there has been a significant shift in the type of employment -- from the manufacturing sector to services. This generally translates into a greater number of trips per employee, less shift-based work, more travel in the peak periods, and a greater reliance upon the single-occupant vehicle.

Sources:

Information on these demographic and economic indicators may be obtained from the U.S. Census, and through contact with State and regional agencies, including MPOs, County Departments of Planning, and the New Jersey Department of Labor. In addition, there are a number of private data collection and management firms that assemble this information and bundle it for sale to clients specializing in market analysis and similar uses.

Tripmaking and Travel Patterns

In this section, address commutation, goods movement, and other tripmaking. Discussion of commutation can focus on modal split (what means of travel do people take from home to work?), origin and destination patterns (from where to where do people travel?), and other journey-to-work characteristics (what time of day are people travelling? Etc.). Trip generation can be assessed through reference to community character, current land use patterns, development intensity, and location of different types of activity centers.

Information on the character of tripmaking for the region surrounding the Town of _____ can help to indicate the challenges faced by transportation infrastructure and services both locally and regionally.

Table XX. Regional Tripmaking by Trip Purpose for the _____ (MPO) Region

Worktrips	28.4%
Social/Recreational	15.2%
Personal Business	14.5%
Goods Movement	13.9%
Shopping	13.7%
Education	11.8%
Other	2.5%

Discussion Examples:

- The Town of _____ is located within the _____ (MPO) Region. Worktrips make up the greatest percentage of all tripmaking for this region (at _____ percent), followed by social and recreational trips at _____ percent. (etc.)

- Given the location of a truck terminal adjacent to the _____ interchange along Interstate _____, and rail sidings along the _____ Rail Line, goods movement plays a considerable role in circulation patterns for the Town of _____.

- The concentration of families with school-aged children, coupled with the fact that the Town of _____ is home to _____ University, indicates that the Town's share of educational trips is considerably higher than the regional average.

A comparison of the ways in which people get to work is useful in indicating local and regional preferences for certain means of travel, and the burdens placed on infrastructure and services associated with them. The table below breaks out the number and percentages of local commuters making the trip to work in personal vehicles (single-occupant vehicles and carpools), by transit (bus and rail), and on bicycle, foot, or other mode. These percentages are then compared to regional averages for each, to determine where the Town of _____ exceeds, falls short of, or scores on par with the region as a whole.

Table XX. Modal Split Figures for the Town of _____, as compared to the overall_____ (MPO) Region

	Town of _____		Regional Average
	Number	Percent	(Percent)
Total Commuters	19,688	100%	100%
Single-Occupant Vehicle	11,043	56.1%	71.8%
Carpool	2,781	14.1%	12.7%
Bus	1,770	9.0%	6.4%
Rail	1,004	5.1%	4.1%
Bicycle	131	0.7%	0.5%
Pedestrian	2,724	13.8%	2.5%
Other	235	1.2%	2.0%

Discussion Examples:

- Given its dense development pattern, clustering of activities, and overall urban landscape, the Town of _____ breaks from the regional averages on a number of levels. The Town's share of single-occupant vehicle commutation is considerably lower than the regional average, due in great part to the multitude of bus lines serving the downtown bus terminal, as well as the Town's location on the _____ commuter rail line, which links it to such regional destinations as _____, _____, and _____.

- Given the densities of population and proximity of employment opportunities in town, this is an environment that proves walkable and accessible by bicycle, as evidenced particularly in a pedestrian trip share that is much higher than the regional average.

Looking at commutation patterns, relative to origins and destinations provides an overview of the workplaces that are popular draws for our residents, and the hometowns from which our employers draw their workers. In other words, this analysis helps to answer the questions:

- Where do people who live in the Town of _____ go to work?
- Where do people who work in the Town of _____ reside?

By answering these questions, we can also determine how far people travel to work, the direction of these trips, and other tripmaking characteristics.

The table below breaks out commutation to various workplace locations throughout the region, from residences in the Town of _____. The table breaks down commutation to spotlight the segments of the population that both live and work in town, travel to neighboring towns for work, and commute to other locations throughout the county, state, and region. In addition, the table calls out key locations within each of these categories to help identify significant trip ends.

Table XX. Commutation Patterns
Town of _____ as Residence (Origin)

Workplace Destination		
Total Commuters	20,520	(100.0%)
In-Town	5,070	(24.7%)
Neighboring Towns	2,775	(13.5%)
Paramus	1,320	
Teaneck	862	
Maywood	268	
Lodi	180	
River Edge	145	
Other Intra-County	3,327	(16.3%)
Englewood	445	
Teterboro	436	
Fort Lee	279	
Fair Lawn	265	
Other Intra-State	5,699	(27.7%)
Newark	279	
Paterson	199	
Jersey City	121	
Interstate	3,649	(17.8%)
Manhattan	2,526	
Other NYC	577	
Other Interstate	546	

Discussion Examples:

- Almost one-quarter of all commuters living in the Town of _____ remain in town for work. Given the compact size and layout of the town, this dynamic lends itself to locally-oriented bicycle and pedestrian travel to work, as reflected in the modal split analysis.

- 13.5 percent of commuters living in the Town of _____ work in neighboring towns, with a large number commuting to _____ *(name towns that have large employment bases)* for work. These two towns are large employment centers, especially with regard to retail and service jobs, with a number of important regional commercial centers and a large concentration of office space between them.

- Manhattan-bound worktrips make up the bulk of all interstate commutation. There are a multitude of bus lines, serving various neighborhoods and activity centers throughout the Town of _____, as well as three rail stations along the _____ Rail Line serving this particular commutation pattern.

Sources:

Commutation information can be determined by accessing Census data, in particular the Census Transportation Planning Package (CTPP) – a set of special tabulations of sample-based Census data tailored to meet the data needs of transportation planners. Data is sorted by place of residence, place of work, and journey-to-work (origin/destination patterns, modal split). This databank includes information on households, housing units, vehicle use and ownership, occupation/industry of workers, number of hours worked, departure and arrival times, travel times, peak-hour characteristics, and other information relevant to commutation patterns and trends. This information is available from the U.S. Department of Transportation's Bureau of Transportation Statistics (www.bts.gov), and may also be made available through the MPO serving your area (NJTPA, DVRPC, or SJTPO) and your County's Department of Planning or Planning Board. Commodity flow information is also available from these sources. More detailed and site-specific information can be collected through surveys. This can be expensive, however, depending upon the type of survey, means of execution, and level of analysis employed. Note that survey research methods can be employed at varying levels of sophistication.

The **Coordination with Other Agencies** section that follows is geared toward identifying those other organizations who have jurisdiction over transportation facilities and services (and, therefore, overall transportation decision-making) in your community. In this section, you will be able to pick and choose among the organizations listed. You may come across some agencies that do not apply to your community; these agencies should be skipped, but be sure to include all those that do apply. Each agency subsection includes a brief description of the organization, its duties, and jurisdiction, as well as website and contact information. By recognizing the role each agency plays in overall transportation decision-making, you will be better equipped to coordinate for the ultimate implementation of your Circulation Element's goals and recommendations.

State Agencies

New Jersey Department of Transportation

The mission statement of the New Jersey Department of Transportation (NJDOT) is to "deliver a safe, reliable, and affordable transportation system that is considered to be the best – every day and in every way – by those who live, work, play, and invest in New Jersey." Further information on NJDOT and its programs is available at http://www.state.nj.us/transportation/. The NJDOT was created in July 1966, although it was the successor to a series of State agencies dating back to 1891. The Department charged with managing and guiding the overall transportation system of the State, with a historical focus on the State Highway System. This system consists of nearly 2,300 route-miles of highway under the jurisdiction of the NJDOT, including most of the Federally-designated Interstate Highway System. About 2,500 of the 6,000 bridges in New Jersey fall under NJDOT jurisdiction, as well.

In addition to designing, constructing, and operating the state highway system, the broad responsibilities of the NJDOT place it at the center of most transportation issues affecting the State, especially from a policy and development perspective. Additional responsibilities include control of access to state highways through a permitting process for driveways and curb cuts, regulation of public transit, regulation of interstate goods movement, and programming of new transportation facilities. The Department shares its responsibilities with a host of other agencies and organizations. These other important players are described throughout this section. Phone (609) 530-2000

NJ Transit

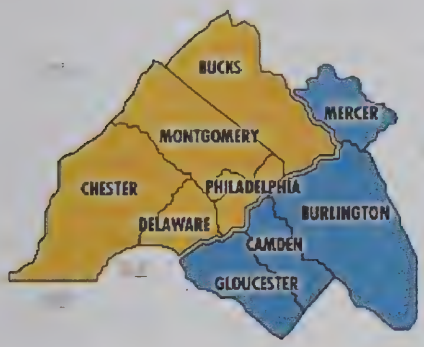
NJ Transit is a public corporation created by the State to build, operate, and maintain vital public transit routes in New Jersey. Its mission is to provide safe, reliable, convenient and cost-effective transit service with a skilled team of employees, dedicated to our customers' needs and committed to excellence.

Covering a service area of 5,325 square miles, NJ Transit is the nation's third largest provider of bus, rail, and light rail transit – linking major points in New Jersey, New York, and Philadelphia. The agency's fleet of 1,900 buses and 591 trains serves more than 321,000 customers, making more than 632,000 trips daily. On 178 bus routes and 12 rail lines statewide, NJ Transit provides 188 million passenger trips and travels more than one billion miles each year.

NJ Transit is charged with the preparation of improvement programs for the public transportation system and its facilities. The agency also administers several publicly funded transit programs for people with disabilities, senior citizens, people living in the state's rural areas and the transportation disadvantaged. In addition, NJ Transit provides support and equipment to privately owned contract bus carriers. As the vehicle that connects New Jerseyans with employment, education, health care and recreational opportunities in and around the Garden State, NJ Transit is vital to the state's economic and social well being and to its quality of life.

Further information on NJ Transit and its programs is available at http://www.njtransit.org/; Phone (800) 772-3606

DVRPC AREA



Metropolitan Planning Organizations

The State of New Jersey is divided into three Metropolitan Planning Organizations (MPOs). They are the North Jersey Transportation Planning Authority, Inc. (NJTPA) (*http://www.njtpa.org*), the Delaware Valley Regional Planning Commission (DVRPC) (*http://www.dvrpc.org*), and the South Jersey Transportation Planning Organization (SJTPO).

NJTPA AREA

The NJTPA covers the 13 counties of northern New Jersey, including Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren counties, and also counts the cities of Newark and Jersey City as individual "subregions." DVRPC has jurisdiction over a 9-county area in the Greater Philadelphia/Delaware Valley region, 4 of which fall in New Jersey: Burlington, Camden, Gloucester, and Mercer counties. SJTPO serves the southernmost 4 counties of New Jersey: Atlantic, Cape May, Cumberland, and Salem counties.

Under the Intermodal Transportation Efficiency Act of 1991 (ISTEA), these organizations were charged with the development of long range transportation plans and the preparation of a Transportation Improvement Program (TIP). The Transportation Equity Act for the 21st Century (TEA-21) was enacted June 9, 1998 as Public Law 105-178, and effectively replaced ISTEA. TEA-21 authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003

(*more information on TEA-21 is available at the FHWA website: http://www.fhwa.dot.gov/tea21/index.htm*). MPOs are primarily responsible for coordinating the transportation planning activities of their members, determining the allocation of financial resources for transportation projects, and assisting members with obtaining funding for their planning programs.

The Transportation Improvement Program (TIP) lists state- and federally-funded state and local highway projects, public transit projects, and statewide transportation programs scheduled for implementation within the next three fiscal years. The TIP includes a detailed description and a funding schedule for each project and program. Since our community is in _____ County, the _____ is our area's MPO. The current TIP has _____ (#) projects that are either in our community or could impact our travel patterns.

Authorities and Commissions

Authorities and commissions play a vital role in the statewide transportation system. Ten independent authorities and commissions have been established to construct, operate, and maintain major highway, bridge, and tunnel facilities in the State. Each of these agencies was created with a specifically-defined mandate. With the exception of the Palisades Interstate Park Commission, these agencies are independent bodies with the power to issue bonds to support projects of public purpose as provided in their respective statutes.

Port Authorities

Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey was established by the Interstate Compact of 1921, which called for "the Creation of the Port of New York District and

THE PORT AUTHORITY OF NEW YORK & NEW JERSEY

the Establishment of the Port of New York." New Jersey was added to the Authority's name in 1978 to recognize its bi-state responsibilities. It was the first interstate agency in the United States, created under a clause of the U.S. Constitution permitting compacts between states.

The stated mission of the Port Authority of New York and New Jersey is to identify and meet the critical transportation needs of the bi-state region's businesses, residents, and visitors: providing the highest quality, most efficient transportation and port commerce facilities and services that move people and goods within the region; providing access to the rest of the nation and to the world; and strengthening the economic competitiveness of the New York – New Jersey Metropolitan region. The Port District, whose boundaries approximate a circle with a 25-mile radius centered on the Statue of Liberty, includes all or parts of 8 counties within northern New Jersey: Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, and Union. Bridges and tunnels in New

Jersey currently owned and operated by the Port Authority include, from north to south:

- George Washington Bridge
- Lincoln Tunnel
- Holland Tunnel
- Bayonne Bridge
- Goethals Bridge
- Outerbridge Crossing

The Port Authority also operates the Port Authority Trans-Hudson (PATH) rapid transit system, which provides interstate rail transit service to Midtown Manhattan and the World Trade Center from Newark, Jersey City, and Hoboken. The Authority also has jurisdiction over the Journal Square Transportation Center, an intermodal facility that feeds into PATH service in Jersey City.

The Authority's Port Newark and Elizabeth Marine Terminal operate as one fully integrated marine terminal, forming the largest and most comprehensive collection of maritime cargo handling facilities on the East Coast of North America. The entire complex is part of Foreign-Trade Zone No.49. The aviation facilities of the Port Authority of New York and New Jersey – including Newark International Airport and Teterboro Airport in New Jersey, as well as John F. Kennedy International Airport, LaGuardia Airport, and the Downtown Manhattan Heliport in New York – comprise one of the biggest and busiest regional aviation complexes in the world.

Additional information regarding this agency is available on the Authority website: http://www.panynj.gov; Phone (212) 435-7000.

Delaware River Port Authority

The Delaware River Port Authority (DRPA) is a regional transportation agency serving the people of southeastern Pennsylvania and southern New Jersey. DRPA was created in 1951 by compact between Pennsylvania and New Jersey, replacing the Delaware River Joint Commission, which originated in 1932. The Port District includes Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem counties in New Jersey (as well as Delaware and Philadelphia counties in Pennsylvania). DRPA maintains four multi-lane, high span bridges to central Philadelphia and its northern and southern suburbs with direct access from the New Jersey side via Interstate Routes 295, 76, and 676, as well as N.J. Routes 38 and 70. These bridges include the Benjamin Franklin Bridge, Walt Whitman Bridge, Commodore Barry Bridge, and Betsy Ross Bridge. DRPA commuter ferry service also provides connections across the Delaware, linking Camden and the Waterfront Park/New Jersey State Aquarium area with Philadelphia's Penn's Landing. Through a subsidiary, the Port Authority Transit Corporation (PATCO), DRPA runs the PATCO Lindenwold Line, which provides high-speed rail

service between Camden County communities and Center City Philadelphia. DRPA has also assumed a leadership role in regional development, focusing on the commercial revitalization of the Philadelphia and Camden waterfronts. Additional information regarding this agency is available on the DRPA website: http://www.drpa.org; Phone (877) 567-3772.

Toll Road Authorities

New Jersey Turnpike Authority

The New Jersey Turnpike Authority was created by the State Legislature in 1948, its primary function was to operate a 118-mile facility from the Delaware Memorial Bridge to the George Washington Bridge approach at U.S. Route 46. This stretch, the "mainline" Turnpike, opened in 1951 to provide a north/south express toll road running from one end of the State to the other, as well as a critical link in the northeast corridor highway network. Subsequent additions have included:

- the Newark Bay-Hudson County Extension, an 8-mile spur from Interchange 14 in the vicinity of Newark International Airport to the Holland Tunnel Approach (opened in 1956);
- the 6-mile Pennsylvania Turnpike Extension, which ties the Pennsylvania Turnpike into the New Jersey Turnpike mainline, just north of the Camden/Philadelphia vicinity (opened in 1956);
- a 10-mile Western Spur, paralleling the mainline Turnpike (now known as the Eastern Spur along this stretch) through the Hackensack Meadowlands, and providing linkages to the Meadowlands Sports Complex and N.J. Route 3 (opened in 1970); and
- a "dual/dual" roadway design which separates heavy commercial traffic from passenger cars between Interchange 8A and Interchange 14 in Newark.

In total, there are 27 interchanges – numbered from 1 to 18W – for entry and exit from the New Jersey Turnpike and its extensions. The northern portion of the mainline Turnpike carries the Interstate Route 95 designation, from the Pennsylvania Turnpike Extension to the George Washington Bridge approach. The Newark Bay-Hudson County Extension carries Interstate Route 78 from its junction with the Turnpike at Interchange 14 through the Holland Tunnel approach. The Turnpike Authority also operates the Vince Lombardi Park & Ride facility, sandwiched between the Eastern and Western Spurs in Ridgefield, and 12 service areas.

Toll collection on the New Jersey Turnpike is operated as a ticket-toll system, along with the EZ Pass electronic toll collection system. Additional information regarding this agency is available on the Authority website: http://www.state.nj.us/turnpike/; Phone (732) 247-0900 x5600.

New Jersey Highway Authority

The New Jersey Highway Authority was created by the State Legislature in 1952, its primary function was to operate the Garden State Parkway. The Parkway is a 173-mile toll road between Cape May and the state line at Montvale, where it connects to the New York State Thruway system. Three sections originally built by the New Jersey State Highway Department (the precursor to NJDOT) were transferred to the Authority in 1987; these sections, one in Cape May County, one in Ocean County, and one in Middlesex and Union counties, remain toll-free.

The Parkway is a freeway-type limited access facility for its entire length, with the exception of a four-mile section in Cape May County with three at-grade crossings (two of which are signalized). All types of vehicles are permitted south of Interchange 105 in Tinton Falls; north of this point, trucks exceeding a specified gross weight are prohibited from using the Parkway.

This road was designed to allow motorists as many convenient access points as possible along its route, the Parkway maintains a total of 359 exits and entrances. Tolls are collected at both barrier tolls (a total of 11) and some exit and entrance ramps (a total of 20). In addition, the EZ Pass electronic toll collection system has now been implemented along the Parkway.

A carefully landscaped roadway, the Parkway offers scenic vistas and flowering vegetation along much of its route. The Authority maintains 3 picnic areas, 9 service areas, and 19 commuter parking lots (providing more than 4,500 parking spaces).

The legislation that directed the New Jersey Highway Authority to construct and operate the Garden State Parkway also gave it the responsibility to develop roadside recreational facilities. From that charge came the creation of New Jersey's premier showcase of the arts – the Garden State Arts Center (now the PNC Bank Arts Center) – located in the 400-acre Telegraph Hill Nature Area in Holmdel.

Additional information regarding this agency is available on the Authority website: http://gspkwy.state.nj.us/; Phone (732) 727-5929.

South Jersey Transportation Authority

The South Jersey Transportation Authority was created in 1991, as the successor to the New Jersey Expressway Authority (as established by the State Legislature in 1962), as well as the Atlantic County Transportation Authority (ACTA). The Authority's primary function is to coordinate southern New Jersey's transportation system, including addressing the highway network, aviation facilities, and transportation problems of Atlantic County. Other counties under the jurisdiction of the Authority include Camden, Cape May, Gloucester, and Salem.

The Authority is charged with the operation of the Atlantic City Expressway, a limited-access toll facility stretching from N.J. Route 42 in Turnersville to its eastern terminus at Atlantic City. The Expressway opened in 1965, providing access to major arterial routes at thirteen interchanges. Tolls are collected at seven toll plazas along the course of the 44-mile expressway. The Authority also operates an intercept parking facility serving casino employees just east of the Pleasantville Toll Plaza.

The Authority also has jurisdiction over the Atlantic City International Airport, which covers approximately 5,000 acres in Atlantic County, 10 miles northwest of Atlantic City. The Airport's aviation services include scheduled air service and charter service as well as ground handling of aircraft, fueling, aircraft maintenance, parking, registration, and collection of landing and parking fees through fixed-base operations. The Authority has developed a capital improvement program to modernize and expand the Airport and its operations as one of its primary economic development initiatives.

Additional information regarding this agency is available on the SJTA website: http://www.sjta.com/; Phone (609) 965-6060.

Toll Bridge and Crossing Authorities

Burlington County Bridge Commission

Subsequent to its creation in 1948 by an act of the State Legislature, the Burlington County Bridge Commission purchased the privately-owned Burlington-Bristol Bridge Company, which itself had purchased the Tacony-Palmyra Bridge Company. The Commission owns and operates two interstate toll bridges: the Tacony-Palmyra Bridge (opened in 1929) and the Burlington-Bristol Bridge (opened in 1931), each connecting Burlington County with Philadelphia's industrialized northern suburbs. In addition, the Commission has jurisdiction over 5 toll-free bridges, and 7 miles of River Road between N.J. Route 73 and Rancocas Creek. Phone (609) 387-1480

Historic Picture of Burlington Bristol Bridge

Cape May County Bridge Commission

The Cape May County Bridge Commission was created by resolution of the Cape May County Freeholders in 1938. The Commission operates 8 facilities in Cape May County: 5 toll drawbridges, 1 toll-free drawbridge, and 2 toll-free fixed bridges. Phone (609) 465-7806

Delaware River and Bay Authority

The Delaware River and Bay Authority was created as a result of a compact into which Delaware and New Jersey entered in 1962. Its primary purposes are the planning, financing, construction, and

operation of crossings between the two states across the Delaware River or Delaware Bay at any location south of the boundary line between Delaware and Pennsylvania, as extended across the Delaware River to New Jersey. The Authority is also authorized to plan, finance, construct, and operate transportation or terminal facilities within these same areas. This bi-state agency operates the Delaware Memorial Twin Bridge – the world's longest twin span suspension bridge – which links the New Jersey Turnpike and Interstate Route 295 to Interstate Route 95 and other key northeast corridor highway routes. The Authority also operates the Cape May-Lewes Ferry system, which carries U.S. Route 9 across Delaware Bay; the Three Forts Ferry Crossing; and airport facilities at New Castle, Cape May, Millville, Delaware Airpark, and Dover Civil Air Terminal. The Authority also uses its resources to participate in economic development ventures throughout Delaware and in the four southernmost counties of New Jersey.

Additional information regarding this agency is available on the Authority website: http://www.drba.net/;. Phone (302) 571-6300

Delaware River Joint Toll Bridge Commission

The Delaware River Joint Toll Bridge Commission (DRJTBC) was established in 1934 by an interstate agreement between New Jersey and Pennsylvania, and was subsequently approved by the Congress of the United States. This Commission was created to take over operation of jointly-owned state bridges north of the Pennsylvania Railroad Bridge in Trenton. In addition, the Commission was authorized to construct new bridges. In 1987, the Commission assumed full financial responsibility for the operation and maintenance of the toll-free bridges within its jurisdiction. The District of DRJTBC jurisdiction for bridge building in New Jersey includes all of Sussex, Warren, Hunterdon, and Mercer counties, as well as the portion of Burlington County north of the Rancocas Creek. The Commission currently operates 7 toll bridges, 11 non-toll vehicular bridges, and 2 non-toll pedestrian bridges across the Delaware River. The DRJTBC's most recent addition – the Interstate Route 78 toll bridge – opened south of Phillipsburg in 1989. Phone (215) 295-501

Park Commissions

Palisades Interstate Park Commission

The Palisades Interstate Park Commission (PIPC) was established by compact between the states of New York and New Jersey in 1937 to administer acquisitions and operations for the Palisades Interstate Park. NJDOT provides maintenance and engineering services to the Commission for the 11.5 miles of Palisades Interstate Parkway within New Jersey. The Parkway is a major thoroughfare connecting the George Washington Bridge at its southern terminus with eastern Bergen County, Rockland County, and the various portions of Palisades Interstate Park that line the western shore of the Hudson River.

Additional information regarding this agency is available on the PIPC website: http://www.pipc.org/; Phone (845) 786-2701

Other Agencies

AMTRAK

Amtrak is the principal provider of long distance passenger rail service in the United States. The Northeast Corridor, with 5 Amtrak stops in New Jersey, is extremely important in providing passenger service between New Jersey and other major northeastern cities, including Washington, Philadelphia, New York, and Boston. Amtrak also connects Philadelphia with Atlantic City. Additional information on Amtrak is available on the website: http://www.amtrak.com; Phone (800) USA-RAIL.

Southeast Pennsylvania Transportation Authority

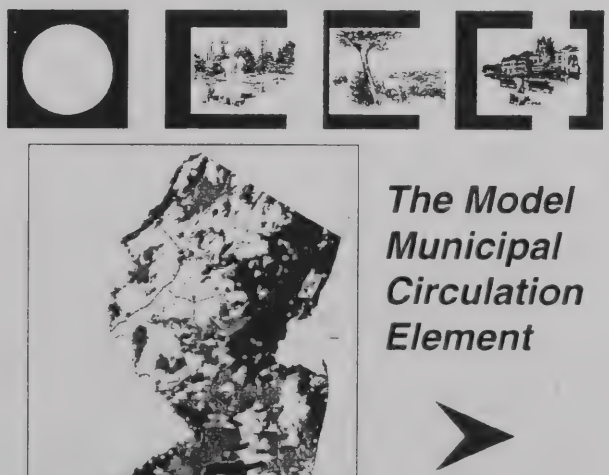
The Southeastern Pennsylvania Transportation Authority (SEPTA) operates an extensive regional public transit system serving the Philadelphia Metropolitan Area, with its focus on Center City Philadelphia. Services are provided via a variety of modes: bus, light rail, trackless trolley (electric buses), commuter rail, subway, and elevated rapid rail. SEPTA services to and from New Jersey consist of two commuter rail services, terminating at Trenton Station (Northeast Corridor) and the West Trenton Station (West Trenton Line). Additional information on this agency is available on the SEPTA website: http://www.septa.com/ Phone (215) 580-7800.

Other Bridge Companies

A number of individual bridge companies have been set up to operate and maintain toll crossing facilities. These include:

- ***Beesley's Point Bridge Company***, which operates a bridge carrying U.S. Route 9 across Great Egg Harbor between Cape May and Atlantic counties; Phone (N/A)
- ***Margate Bridge Company***, which operates a bridge linking the mainland to Margate City in Atlantic County; Phone (609) 822-9175
- ***Dingman's Choice and Delaware Bridge Company***, which operates a bridge across the Delaware River at Dingman's Ferry, connecting Sussex County Route 560 with Pennsylvania Route 739; Phone (570) 828-2623.

The **Roadways** section that follows is the most common section that you find in circulation elements. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you will probably find that the majority of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. You will also find images of roads and typical cross sections. The graphic images makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.



The Model Municipal Circulation Element

Existing System

The system of roadways within a municipality is a significant part of the land use planning process, since it is the roadway network that provides people with their most basic way to get around. The Town of _____ is *(very/somewhat)* dependent upon the automobile and has _____ (*adequate or inadequate*) access via the existing road system.

The purpose of this section of the Circulation Plan Element is to document the characteristics of the existing road network throughout the Town of _____, including an analysis of the jurisdiction of the roads, the right-of-way widths of the roads, and the incidents of traffic accidents occurring on those roads. The information has been analyzed in order to determine those situations where the present roadway system appears to be deficient or problematic; thereby, helping to form the basis for the recommendations articulated later in this document.

Jurisdiction of Roads

The "Jurisdiction of Roads Map" indicates the Federal, State, County and Town jurisdiction of roads within _____ Town. Generally speaking, the volume and the function that a road performs are revealed by the political jurisdiction that has control of its design and maintenance.

There are approximately _____ (#) miles of public roads in _____ Town. The bulk of these consists of _____ (#) miles of municipal roads, followed by ____ (#) miles under county jurisdiction, and ____ (#) miles of state and federal roadways. (*There may also be private roads not included in the above network.*) The State of New Jersey, through the New Jersey Department of Transportation, is responsible for maintaining all federal and state highways, except for portions of _____ (*list state or federal roadways with sections NOT under NJDOT jurisdiction in your town. For example Garden State Parkway and NJ Turnpike*).

Interstate ___ (#) runs _____ (*east-west or north-south*) and is located approximately ____ (#) miles _____ (*north or south or east or west*) of the town center. State Highway ## runs _____ (*east-west or north-south*) and is located about ____ (#) miles _____ (*north or south or east or west*) of the center of town.

Roads under the jurisdiction of the County of _____ include _____ Road/CR ___ (*County Route #*), _____ Road/CR ___ (*County Route #*), and _____ Street/CR ___ (*County Route #*).

Functional Classifications of Roadways
Each of the various roads in the Town of _____ is called upon to perform a different type of function in the overall transportation network. For planning purposes, roads are generally classified into three (3) major types: arterial, collector, or local. Each of these types defines a certain range of function.

(Please note that the definitions are different for rural and urban areas. For more information, refer to Section 2 of the NJDOT Roadway Design Manual, "General Design Criteria".)

Arterial Roads – Vehicular rights-of-way whose primary function is to carry traffic in a continuous route across or through an area. Arterials are typically a principal part of the road network for through traffic flow, taking traffic from collector streets that serve neighborhoods and connecting to freeways, expressways, and/or parkways. Arterial roads also may be broken down into principal and minor arterials. Principal arterials are those interstate and major highways that form an interconnected network of continuous routes serving regional corridors having the highest traffic volumes and the longest trip lengths. Minor arterials interconnect with and augment the principal arterial system.

Collector Roads – These are the roads that carry traffic between arterials and local streets and provide access to abutting properties. In the Town of _____, collectors are subdivided into two functional road systems: primary (major) and secondary (minor). The primary or major road is so classified due to its higher traffic volumes (both present and anticipated), and its importance in the overall circulation system. Essentially, this type of road carries more vehicular traffic then the typical collector, yet it is not an arterial road. The secondary or minor collector is the more typical collector type road connecting local streets with arterials or primary collectors and is herein referred to as a collector.

Local Streets – Streets that primarily provide access to abutting properties, usually single-family homes. These roads typically have low traffic volumes and low speeds. The local road system contains the large majority of all roadway mileage in a state, but only a small percentage of total traffic

Note: The functional classifications described above are ideal types, since they rarely exist in true form.

Existing roads in the Town of _____are classified as the following types:

Table ___ *(# of table)*:

Street Classification	
Interstates	I-80, I-287, I-280 (*names of highways*)
Arterials	County Route 522, Amwell Road (*names of roadways*)
Primary Collectors	Main Street, Central Avenue (*names of roadways*)
Minor Collectors	Midway Avenue, Patterson Street (*names of roadways*)
Local Streets	Oak Court, Ash Way (*names of roadways*)

Source:_____ (provide source of data for the above table)

Classification and Access
Access is characterized as limited, partial, or full depending on the purpose of the roadway.

Limited access occurs on highways especially designed for through traffic. Abutting lot owners usually have a right to reasonable, but not direct, access. Interstate highways, parkways, and freeways are considered limited access highways.

Partial access occurs on arterial and collector roadways. An arterial transportation route primarily serves through traffic and provides access as a secondary function. An arterial may have signalized intersections and access via driveways and turn lanes may be restricted through the use of raised medians or jersey barriers.

Collector roads primarily serve intra-county trips and are characterized by moderate volume and speed. They provide for land access, traffic circulation, and access to arterial routes. Access to abutting properties may or may not be restricted.

Full access occurs on local roads whose purpose is to provide direct access to abutting land and roads of higher classification. Mobility is lower than for other classifications and through movements are discouraged, especially in urban areas.

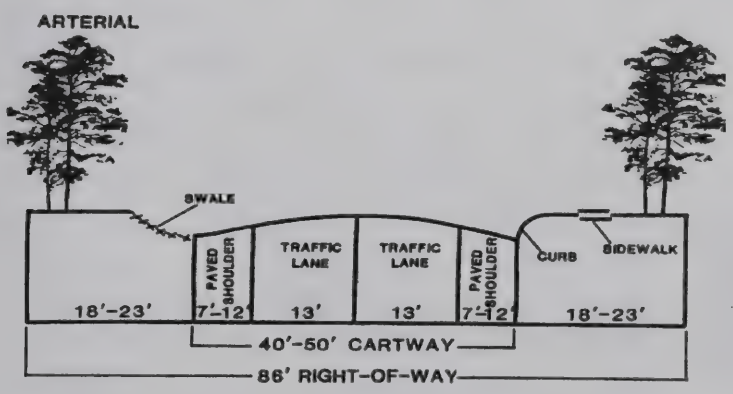
Table ____ *(# of table)*:

The Town of _____Road System Service Characteristics				
Roadway	**Length**	**Access**	**Speed Limit**	**Orientation**
Interstate				
I-80 (#)	3.2 (#) miles	Limited	55 (#) mph	(east – west)
Federal				
US 202 (#)	6.0 (#) miles	Partial	55 (#) mph	(north – south)
State				
NJ 47 (#)	5.1 (#) miles	Partial	45 (#) mph	(north – south)
County				
CR 537 (#)	4.3 (#) miles	Full	35 (#) mph	(north – south)
Municipal				
Oak Lane	0.7 (#) miles	Full	25 (#) mph	(east – west)

Source:_____ (provide source of data included in the above table)

Existing Right-of-Way Widths

The map entitled Existing Right-of-Way Widths (*provide map*) shows the estimated street right-of-way widths of the roads within the Town of _____ as detailed from the Town's Tax Assessment Maps revised to _____ (*date*). Generally speaking, the right-of-way widths of a roadway also give an indication of the traffic volumes traversing the road and of its functional performance.



It should be noted that the right-of-way of a street is not synonymous with the width of the paved portion of the roadway, which is referred to as the cartway width. The right-of-way includes the paved area, or cartway, the shoulders, and most often the sidewalks, if present.

Usually, State and County roads have the widest right-of-way because they function as either arterial or collector roadways and, therefore, handle the heaviest traffic volumes and have more lanes. In _____ Town, _____ (*name of highway*) has a variable right-of-way width of at least _____ (#) feet, with most of the highway having a right-of-way greater than _____ (#) feet in width and ranging up to _____ (#) feet in width.

_____ County roadways generally range in right-of-way widths between _____ (#) feet and _____ (#) feet. However, there are some segments of County roadways that have less width, generally in the less developed areas of the Town. Due to the lack of development along these segments of roadway, the dedications of land for the additional and necessary right-of-way have not yet been provided. The municipal roadways in _____ Town generally range between _____ (#) feet to _____ (#) feet in right-of-way width.

With proper land use planning and zoning controls, it is possible to limit the right-of-way and cartway widths of roads, while nevertheless providing sufficient room for designs that enable the safe and convenient movement of traffic. As stated earlier in this document, it is a goal of _____ Town to have the roads within the municipality improved to the degree necessary to provide safe and convenient traffic movement. Conversely, it is also a goal of _____ Town to prevent any road work which may cause traffic speeds to unnecessarily increase, cut-back existing bicycle and pedestrian areas, and require the removal of existing vegetation along the road's frontage.

Congestion

A safe and efficient roadway system is vital for the continued economic health of the Town of _____. The following evaluation of the system is focused primarily on capacity deficiencies on the major roadways. Figure ____ *(# of attached figure/map)* presents the town's areas of congestion problems.

Traffic Volumes

Traffic volumes on roadways within _____ Town have been increasing at a rate of ____ (#) percent per year, resulting in increased travel times, capacity problems, diversion of traffic from highways to local roads, increased air pollution, and additional resources having to be diverted to new roadway construction. During _____ (*year*), there were

approximately _____ (#) daily vehicle miles of travel (VMT) on roadways in _____ Town. According to NJDOT, the VMT statewide has increased by approximately ___ (#) percent from _____ (*year*) to _____ (*year*).

Traffic Crashes

The table below identifies those intersections in _____ Town that had the highest number of crashes in _____ (*year*). The intersection of _____ and _____ (*names of intersecting roads*) has had the highest number of traffic crashes in _____ Town during recent years. Congested roads and intersections contribute to the high number of crashes.

Table ___ *(# of table)*:

Ranking	1998 (*year*) Crash Locations	# of Crashes	# of Injuries
1	*U.S. Route 130 at U.S. Route 1*	*53*	*29*
2	*U.S. 9W at Palisade Ave*	*40*	*27*
3	*N.J. 23 at Ratzer Road*	*35*	*30*
4	*Bridge Street at Main Street*	*31*	*19*
5	*U.S. 1&9 at Secaucus Road*	*27*	*20*
6	*CR 519 & CR 620*	*25*	*21*
7	*Warren Road at Hillside Ave*	*24*	*15*
8	*N.J. 70 at N.J. 88*	*22*	*12*
9	*River Road at Williams Road*	*19*	*10*
10	*Manchester Drive at Park Ave.*	*15*	*10*

Source:_____ (source of data for above table).

Crash Analysis

An analysis of traffic crashes gives some indication of how well the existing road network performs and points out areas where further study and corrective actions may be necessary. Table ___ *(# of table)* shows the locations and number of crashes which were reported to have occurred in _____ Town during the period between _____ (*date*) and _____ (*date*).

A total of _____ (#) crashes were reported to have occurred in _____ Town during the _____ (#) month period between _____ (*date*) and _____ (*date*), which was _____ (#) _____ (*less or more*) crashes than the _____ (#) accidents that were reported during _____ (*previous year*).

(If available, insert table showing time of day and number of crashes and supporting text. This would include the explanation of any existing patterns. This could be followed by additional

tables showing crashes by year on different types of roads [municipal, county, state, federal] including the percentage change in crashes over a given time period.)

EXAMPLE:

Jurisdiction	1990 *(year)*	1995 *(year)*	%Change
Municipal	*210*	*237*	*12.9%*
County	*172*	*140*	*-18.6%*
State	*146*	*153*	*4.8%*
Private	*125*	*157*	*25.6%*

Source:

THE FOLLOWING TABLES COULD ALSO BE INCLUDED:

Types of Traffic Accidents and Number of Injuries and Fatalities in the Town of _____

Traffic Accident Category	Year 1	Year 2	Percent Change
MVA			
MVI			
Total Accidents for Year	653	687	5.2%
Fatalities	11	19	72.7%
Injury Accidents	107	180	68.2%
Number of People Injured	142	201	41.5%
Pedalcyclist Accidents	17	15	-11.8%
Pedestrian Accidents	34	38	11.8%
Moped Accidents	34	31	-8.8%
Accidents Involving DWI	55	65	18.2%
Parked Vehicles Involved	41	31	-24.4%
Summons Issued for Accident	240	209	-12.9%
Private Property Damage Involved	589	602	2.2%
Hit & Run Accidents	20	25	25.0%

Source:

(The above table could also be prepared for each major roadway or corridor in your town.)

Traffic Accident Causes in the Town of _____

CRASH CATEGORIES	Year 1	Year 2	Percent Change
Unsafe Speed	42	49	16.7%
Driver Inattention	115	142	23.5%
Failure to Obey Traffic Signal	32	40	25.0%
Disregarded Stop Sign	16	14	-12.5%
Failure to Yield Right of Way	30	33	10.0%
Improper Lane Change	25	20	-20.0%
Improper Passing	21	15	-28.6%
Improper Use of Turn Signals	12	17	41.7%
Improper Turning	52	45	-13.5%
Following Too Closely	86	99	15.1%
Backing Up Unsafely	34	45	32.4%
Dazzling, Improper, No Lights	5	8	60.0%
Wrong Way on a One-Way Street	2	1	-50.0%
Improper Parking	12	8	-33.3%
Pedestrian/Pedalcyclist Actions	24	23	-4.2%
Improper Right Turn on Red Light	17	29	70.6%
Failure to Signal	29	22	-24.1%
Alcohol/Drug Involvement	55	65	18.2%
Vehicle Defect	12	8	-33.3%
Oversized Vehicle	17	12	-29.4%
Tire Failure or Inadequate Tire	5	6	20.0%
Animal Actions	3	5	66.7%
Defective Shoulder	0	0	0.0%
View Obstructed or Limited View	15	18	20.0%
Water Puddles	1	1	0.0%
Debris Obstruction on Roadway	4	2	-50.0%
Improper/Inadequate Lane Markings	0	0	0.0%
Holes/Bumps/Ruts on Road	3	0	-100.0%
Other Road Defects	2	1	-50.0%
Traffic Control Device	0	0	0.0%
Other	3	1	66.7%

Source:

Traffic Accidents in the Town of _____ by Day of Week

Day of Week	Year 1	Year 2	Percent Change
Sunday	149	139	-6.7%
Monday	54	72	33.3%
Tuesday	42	60	42.9%
Wednesday	44	50	13.6%
Thursday	45	54	20.0%
Friday	102	122	19.6%
Saturday	217	190	-12.4%

Source:

Traffic Accidents in the Town of _____ by Time of Day

AM Hours	Number of Accidents	PM Hours	Number of Accidents
0000-0059	20	1200-1259	20
0100-0159	22	1300-1359	13
0200-0259	12	1400-1459	10
0300-0359	6	1500-1559	35
0400-0459	9	1600-1659	59
0500-0559	18	1700-1759	74
0600-0659	48	1800-1859	45
0700-0759	61	1900-1959	42
0800-0859	65	2000-2059	15
0900-0959	40	2100-2159	13
1000-1059	19	2200-2259	12
1100-1159	8	2300-2359	21

Source:

Improvement Plans, Programs, and Studies

Capital Improvement Plans

The municipal capital improvement plan is prepared on an annual basis. This plan is for _____ (*one/two/three/four/five/six*) years and is reviewed by the Planning Board and approved by the municipal council. The transportation portion of the capital improvement plan is prepared by the _____ (*municipal engineer/town council/town planner/other*). There are ____ (#) projects in the current capital improvement plan that refer to roadways.

The County has a ____ (#) year capital improvement plan. The County plan is prepared annually and lists projects for the next ____ (#) years. The County plan is prepared by

the Department of _____ and is approved by the County Freeholders at a public meeting. The County _____ (*solicits or does not solicit*) input from municipal representatives. The County plan has ____ (#) roadway projects in their program that could impact our community.

Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) road projects that may impact our community.

Improvements in Progress
The following roadway and intersection improvements are currently in the design phase:

- _____ (*name of intersection, roadway, bridge, etc.*)
- _____ (*name of intersection, roadway, bridge, etc.*)

Planned Improvements
The policies stated in the New Jersey State Development and Redevelopment Plan relating to transportation have been considered and incorporated into the formulation of this Circulation Plan Element.

The _____ County Highway Master Plan

The _____ Study

(List and describe any road improvement plans, corridor studies, regional management plans, design guidelines, or previous circulation elements that deal with roadway facilities and policies in your town.)

The State Highway Access Management Code
The State Highway Management Act was signed into law on February 23, 1989. Pursuant to this Act, the New Jersey Department of Transportation adopted the State Highway Access Management Code on March 25, 1992. The Municipal Land Use Law requires the contents of municipal ordinances governing subdivision and/or site plan approval to include provisions ensuring conformity with the State Highway Access Management Code regarding any state highway within the municipality and with any County Management Code regarding any county roadway within the municipality.

The State Highway Access Management Code consists of two components. The first is an access classification matrix and the second is a desired typical section for each segment of each state highway. Access levels to each classification and segment of road are established in the Code with the overriding purpose of controlling access to adjacent lands commensurate with the classification, speed and design of the highway.

Within the Town of _____, the following roads fall under State jurisdiction:

- State Highway _____ (*Route #*)
- State Highway _____ (*Route #*)

Existing and proposed access levels and desired typical sections for the various portions of these highways in _____ Town are included in Appendix _____ (#) of this document.

(*Provide a table showing the various access levels and typical sections of any state highways in your town, and describe what those access levels and typical sections look like.*)

The _____ County Access Code
(*Describe the provisions of the county code, if it exists, and indicate which roads within your town are affected.*)

Plan Recommendations

Transportation Circulation Plan
The Transportation Circulation Plan should be updated to accomplish the following objectives:

- Establish or update the functional classifications of the existing and proposed roadways within the Town of _____ ;
- Establish or update the required right-of-way and cartway widths for each roadway functional classification;
- Establish the proposed cross-section for each roadway functional classification, including the number and width of traffic lanes and the requirements for shoulders and sidewalks;
- Designate the location of intersections that need realignments, widening, and/or traffic control signals, the designs of which are to be engineered at the time the intersection is to be improved; and
- Recommend specific development policies to be implemented by the Town of _____ in order to effectuate the traffic circulation goals and objectives of the Town; thereby alleviating existing and/or future traffic problems and promoting sound planning practices.

It should be understood that the Transportation Circulation Plan is not intended to be a static document that is fixed for any particular time period; instead, it is subject to

modification and refinement as additional information becomes available or circumstances change. Further, the Transportation Circulation Plan is a planning document; therefore, the exact engineering design for the proposed improvements to existing and future roadways and intersections are subject to site specific characteristics and restrictions that are beyond the scope of this report and will be determined at the time the particular improvement is to be constructed.

The Transportation Circulation Plan Map and the Proposed Road Function Classifications

The Transportation Circulation Plan Map indicates the proposed functional classifications of the roads within the Town of _____. *(Provide a map showing the roadways within your town and indicate the classifications and right-of-way widths.)*

As noted, five (5) functional classifications are proposed, including arterials, major collectors, minor collectors, major local roads, and minor local roads. The chart entitled "Proposed Road Function Classifications" specifically lists the roads or roads portions included within each category.

Proposed Road Function Classifications for the Town of _____

Roadways by Proposed Functional Classification	**Proposed Right-of-Way Width**
State Highway 72 *(route #)*	Varying
Arterial Roads	
I-80 *(name or section of road)*	160 feet
County Route 535 *(county route #)*	60 feet
Major Collectors	
Raritan Road *(name or section of road)*	56 feet
Main Street *(name or section of road)*	26 feet
Minor Collectors	
Beach Avenue *(name or section of road)*	50 feet
3rd Street *(name or section of road)*	26 feet
Major Local Roads	
Prospect Street *(name or section of road)*	30 feet
Aruba Street *(name or section of road)*	46 feet
Minor Local Roads	
Westervelt Place *(name or section of road)*	30 feet
Donna Court *(name or section of road)*	26 feet

The Proposed Roadway Design Specifications

The Proposed Roadway Design Specifications Chart specifically indicates the recommended construction standards for the municipal and county roads in the Town of _____, including right-of-way and cartway widths, the number and dimensions of the traffic lanes, and the width and required improvements for the cartway shoulders.

It should be noted that the right-of-way includes the paved area, or cartway, the shoulders, and the land area outside the shoulders where sidewalks, street trees, and other such public improvements may be located.

Proposed Roadway Design Specifications

Roadway Category	R-O-W Width	Traffic Lanes		Shoulder Width in Cartway	Width Outside Cartway on Each Side	Width of Cartway
		#	Width			
Arterial	124	6	12	12	14	96
Major Collector	84	4	12	8	10	64
Minor Collector	60	2	12	8	10	40
Major Local	44	2	12	0	10	24
Minor Local	40	2	10	0	10	20

Other Proposed Roadway Improvements and Recommendations

In order to provide a safer, more efficient vehicular traffic flow within the Town of _____, the Traffic Circulation Plan Map indicates the locations of intersections in the town where improvements and/or traffic control signals are recommended. While no specific engineering design recommendations are proposed at this time, the general recommended improvements to the identified intersections include:

- the realignment of the roads to intersect at ninety degree angles;
- the elimination of sight distance problems and other hazards;
- the improvement of traffic flow;
- the calming of traffic flow in residential and school zones; and
- the construction of improvements to the surface water drainage infrastructure.

Based on crash data, the area surrounding the following intersections need additional study:

1. _____ (*name of roadway*) and _____ (*name of intersecting roadway*)
2. _____ (*name of roadway*) and _____ (*name of intersecting roadway*)
3. _____ (*name of roadway*) and _____ (*name of intersecting roadway*)

Proposed Administrative Recommendations

In addition to the recommendations for the physical improvement and modifications to the road network within the Town of _____, the Transportation Circulation Plan also recommends that specific development policies be adopted and implemented as part of the Land Development Ordinance of the Town of _____.

The following administrative recommendations will help control the pattern of development along the roadways in _____ Town, help buffer residential and commercial uses from the vehicular traffic on the roadways, and help provide a safer transportation circulation system.

- The Proposed Roadway Design Specifications, as recommended herein, should be adopted as part of the Land Development Ordinance.

- The Town of _____ should prepare a 5-year road improvement plan in conjunction with _____ County. This plan should study areas identified in the Town Transportation Circulation Plan Element and prioritize the recommended improvements for all road infrastructure improvements that fall under county and municipal jurisdiction.

- The Town of _____ should prepare a 5-year road improvement plan in conjunction with the State of New Jersey. This plan should study areas identified in the Town Transportation Circulation Plan Element and prioritize the recommended improvements for all road infrastructure improvements that fall under state and municipal jurisdiction.

- In order for all parties involved in the process of land development in the Town of _____ to more fully understand the potential impact upon the existing road network that will result from a proposed major development, all preliminary major subdivision applications for five (5) or more lot units and/or all major site plan applications should be accompanied by a Traffic/Transportation Impact Statement, unless specifically waived by the Planning Board or Zoning Board of Adjustment.

- The review of all subdivision and site plan applications should include, when appropriate, an analysis of the need and/or appropriateness for the future extension of proposed roads and/or driveways into adjacent developable lands, especially where access to other lands currently is limited or problematic.

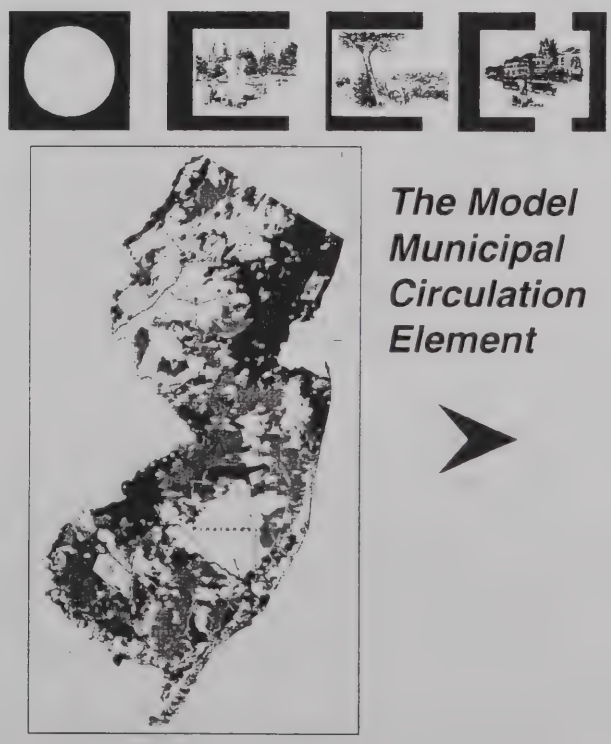
- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may include vehicle miles traveled (VMT) per capita, vehicle air pollutant emissions, poor bridge/pavement condition, etc.

Appendices

Appendices should include:

- State Highway Access Levels by Route and Milepost (including desired typical sections and right-of-way widths)
- Proposed Cross Sections of Roads – By Functional Classification (including sketches)

The **Walkways** section that follows is usually not found in most circulation elements. Since just about everyone walks, every day, even if you are just walking from a car to a store and back, pedestrians are a critical link in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you will probably find that the majority of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.



Existing System

In the 2000 Census the Town of _____ had a total of ### persons walking to work. This is down/up by ## from the 1990 Census. This trend is typical of (or different than) the region and state as a whole. The total amount of persons walking to work makes up #% of the total work force.

(Census Data can be found at http://www.census.gov, from the NJ State Data Center at http://www.state.nj.us/labor/lra/njsdc.htm or from your local County Planning staff)

Pedestrian Circulation

The pedestrian system in _____ Town is largely defined by the roadway network and therefore consists primarily of the sidewalks and shoulders along the streets, and the crosswalks, curb ramps, medians and signals provided at intersections. Principal pedestrian streets *(where people walk most often)* generally consist of the minor arterial and collector streets in town, which include _____ Street and _____ Avenue.

Typical pedestrian distances are shorter than vehicle trip distances, and travel distance poses a greater limit on pedestrian travel compared to vehicle travel. As a result, the pedestrian network in the Town of _____ includes numerous shortcuts and passages, including parking lots, alleys and pedestrian paths. Walkways to off-street parking lots provide a critical portion of the pedestrian network, both to provide access to the parking lot and to allow cut-throughs between blocks.

Because of the _____ (*mix or homogeneity*) of land uses within the Town of _____, and because of the _____ (*continuity of or numerous breaks in*) the pedestrian network and the _____ (*high or low*) quality of the pedestrian environment, a _____ (*substantial or small*) portion of local trips in the town are made by walking. Elimination of vehicle trips by walking helps to enhance the quality of life, provides a healthy citizenry and reduces the total amount of traffic on local streets. Improvement of the sidewalks and their landscaping will make walking more appealing and further the goal of making the Town of _____ a truly pedestrian-friendly community.

Sidewalks

A sidewalk is an improved facility intended to provide for pedestrian movement usually, but not always, located in the public right-of-way adjacent to a roadway. Sidewalks are typically constructed of concrete, but can be built with other materials, such as asphalt or even wood. Sidewalks are especially important in densely developed areas, such as town centers or residential developments. They are also important around schools, parks, municipal buildings, and senior citizen housing.

In our community sidewalks exist in _____ (*many or very limited*) areas. Please refer to the Sidewalk Inventory Map *(this map could be done easily just by drawing a line on an existing road map to show where the sidewalks are located)* located in the appendix to see the existing network of sidewalks located within our Town. Also indicated on the map is the location of any sidewalk that has been bonded for construction as a condition of final subdivision approval. The Sidewalk Inventory Map also indicates the type of material used in the construction of the sidewalk, its width and location, and whether it is constructed on one or both sides of the street.

The Sidewalk Inventory Map shows that there *is/isn't* a discernible pattern of sidewalks in the Town of _____. There *are/aren't* many segments of sidewalk throughout the town that do not connect or continue to other sidewalks or pathways. There _____ (*are or are not*) design standards in the Town of _____'s Land Development Ordinance for the provision and location of sidewalks.

(Design recommendations for sidewalks and other pedestrian pathways are different for rural and urban areas. For guidelines appropriate to your town, see the Pedestrian Compatible Planning and Design Guidelines, which can be found on the NJDOT web site at http://www.state.nj.us/transportation/publicat/pedest_guide.htm or can be obtained from the Bicycle/Pedestrian Advocate at NJDOT.)

Areas in which sidewalks should be installed because of heavy pedestrian traffic include:

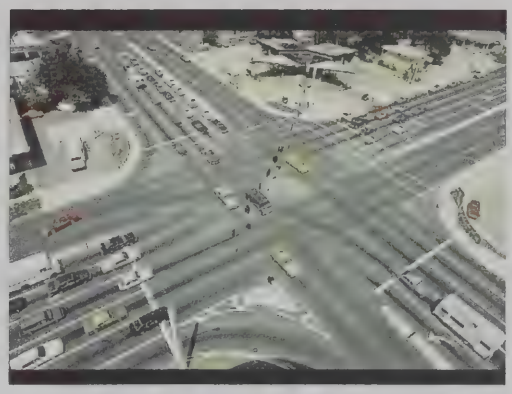
1. The central business district, which includes _____ Street and _____ Street.
2. The area surrounding the senior citizens housing on _____ Street.
3. The residential neighborhoods bounded by _____ Street and _____ Avenue.
4. The area surrounding the _____ Elementary School, the _____ Middle School, and the _____ High School.

The following areas have dirt paths along the side of the road, indicating an immediate need for sidewalks:

1. _____ Street
2. _____ Avenue
3. _____

Intersections

Generally the most concentrated area of pedestrian activity occurs at street intersections, especially in business districts. Not only do pedestrian flows intersect each other at these locations but these flows are interrupted by vehicular cross traffic and are exposed to vehicular turning movements. Since these areas have higher concentrations of pedestrians and cross traffic, they are the least desirable places for sidewalk impediments that constrict flow and may result in pedestrian overflow into vehicular spaces.



Pedestrian facilities should be designed to provide for pedestrian flows and the storage of pedestrians waiting to make their desired street crossing. It is desirable not to locate parking spaces, poles, mail boxes, bus stop shelters, planters, trees and similar items near crosswalks where they may obscure pedestrians and the handicapped from the motorists' view and decrease pedestrian storage and queuing areas.

Intersections, particularly signalized intersections, are the most complex part of the road network for pedestrians. There are 32 possible vehicle to pedestrian conflicts at the 4-way intersection of two roads. Many occur at high speeds. The Town of _____'s Police Department has indicated that the following intersections are areas of concern for pedestrians:

- _____ (name of roads at intersection)
- _____ (name of roads at intersection)

Signals and Pushbuttons

Pedestrian buttons are installed at signalized intersections and crossings. They can either activate the vehicular signal phase so that the pedestrian may cross with traffic, or they can activate a pedestrian crossing phase, indicated with pedestrian signal heads (the standard "Walk/Don't Walk). Some pedestrian pushbuttons bring an immediate change in the traffic signal, while others merely insert a pedestrian crossing phase into the signal's cycle.

Pedestrian pushbuttons and/or signal heads are provided at the following locations in _____ Town:

1. The central business district, at the intersection of _____ (*name of street*) and _____ (*name of intersecting street*).

2. The area surrounding the senior citizens housing, at _____ (*name of street*) and _____ (*name of intersecting street*).
3. The mid-block crosswalk on _____ (*name of street*) in front of the _____ Elementary School.

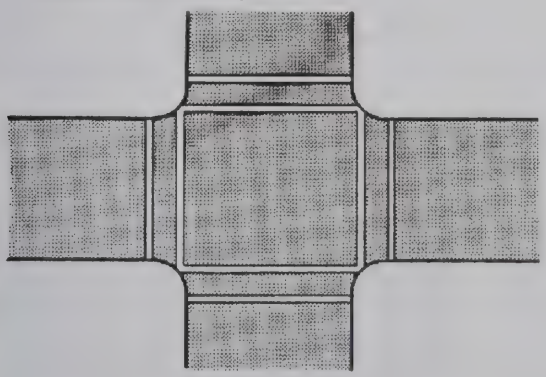
Crosswalks

A crosswalk is essentially an extension of a pedestrian walkway (a sidewalk, a path or a shoulder) across an intersection, whether it is marked or not. Outside of an intersection, an official mid-block crossing is created with pavement markings and warning signs. Crosswalks must be clearly discernible to pedestrians to guide them in their proper path, and to motorists to warn them of the pedestrian crossing point.

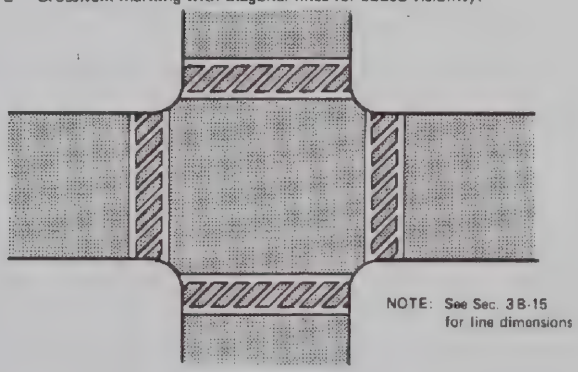
The primary types of crosswalk markings are standard striping, ladder striping, and textured. Standard crosswalk striping consists of two parallel white lines, while ladder- or zebra-striping includes white lines at either a 45° or a 90° angle. Textured crosswalks are constructed of brick pavers, or other materials, to denote the pedestrian crossing space. These are most often seen in downtown areas and are usually part of a general streetscape program.

(The following graphics are from the Manual On Uniform Traffic Control Devices 1988 Edition)

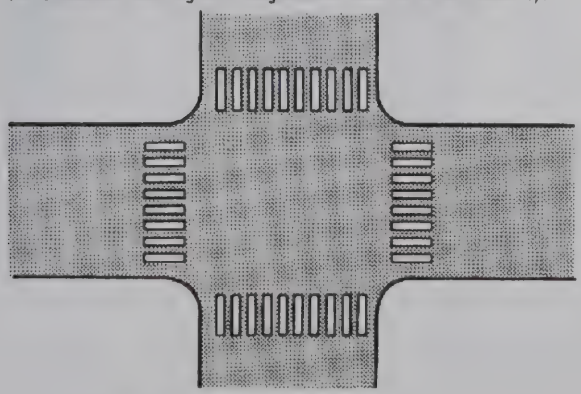
a – Standard crosswalk marking.



b – Crosswalk marking with diagonal lines for added visibility.



c – Crosswalk marking with longitudinal lines for added visibility.



In the Town of _____, marked crosswalks are provided at the following locations:

1. The central business district, which includes _____ Street and _____ Street.
2. The area surrounding the senior citizens housing on _____ Street.

3. The area surrounding the _____ Elementary School, the _____ Middle School, and the _____ High School.

The above mentioned crosswalks have the following characteristics:

Location	Crosswalk Types	Crosswalk Width	Crosswalk Length	Sign Types	Condition
Central Business District					
Main Street/Cedar Avenue	Ladder striping	6 feet	44 feet	No signage	Sufficient (needs signage)
S. Broad Street/Lincoln Avenue	Textured	6 feet	50 feet	Yield to Ped in crosswalk	Newly constructed
Senior Housing Area					
West Street/Hillside Avenue	Standard striping	8 feet	50 feet	Standard Ped crossing	Faded (needs restriping)
School Area					
Franklin Avenue (mid-block)	Standard striping	8 feet	60 feet	School crossing - with flashers	Upgrade to ladder striping

The Crosswalk Map indicates the crosswalk locations in the Town of _____.
(Provide a map with crosswalk locations and characteristics marked.)

ADA Curb Ramps

The Americans with Disabilities Act of 1990 (ADA) mandates the provision of access to employment, services, and the built environment to those with disabilities. Access in the pedestrian network includes curb ramps that allow pedestrians using wheelchairs, crutches, walkers, strollers or shopping carts to travel easily from a sidewalk, down the curb, and across a street or driveway.

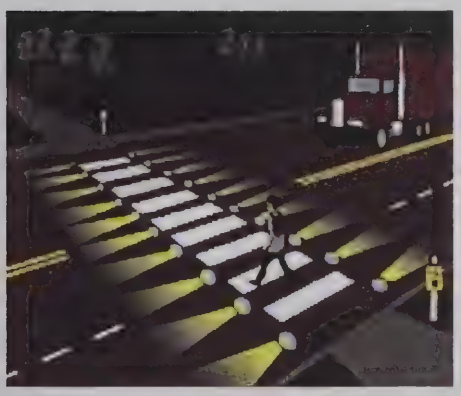
The regulations of the Architectural and Transportation Barriers Compliance Board require that a ramp or curb ramp be provided anywhere there is an abrupt grade change (greater 1/2 inch), or anywhere that the slope of an accessible pedestrian route is greater than 1:20, if no other means of accessible vertical access is provided. Numerous studies have demonstrated that where ramps or curb ramps have been provided along pedestrian routes, most pedestrians use them. Joggers, hurried commuters, children and the elderly will seek to use an available curb ramp in lieu of stepping over a curb, provided that the ramp is conveniently situated. Similarly, most pedestrians prefer to use ramps in lieu of steps, if the ramp is conveniently located and provides adequate capacity. Ramps and curb ramps especially benefit persons with arthritis or other disabilities that limit one's ability to negotiate vertical changes. As a result, these

pedestrian facilities, originally provided to assist persons in wheelchairs, have been demonstrated to provide a major benefit to a broad cross section of the population.

Curb ramps are important facilities that should be provided anywhere there are sidewalks. _____ Town _____ (*has or has not*) updated its circulation network to be compatible with ADA Guidelines.

A program _____ (*has or has not*) been established to upgrade all intersections on local roads in the Town of with ADA curb ramps. A public sidewalk curb ramp with a level landing shall be provided wherever a public sidewalk or public pedestrian easement crosses a curb or other change in level. Examples of places that require the provision of a curb ramp include:

- intersections
- painted crosswalks at mid-block locations
- crosswalks at exit or entrance ramps
- driveways
- channelized islands or divisional islands
- median islands at mid-block locations



Illumination

Crosswalk illumination can substantially enhance pedestrian safety during darkness. Vehicle headlamps often do not provide sufficient illumination to permit the motorist to identify the presence of a pedestrian in sufficient time to take the necessary evasive action. Special or additional street lighting may be required to assure that the pedestrian is adequately lit. Street lighting should be designed to ensure that the light is reflected off the pedestrian to driver's eyes. *(In general, illumination should be considered as warranted when the night visibility requires lighting in order to provide the mutual sight distance capabilities described as necessary in AASHTO.)*

Pedestrian Crossing Signs

Mid-block crossings and crossings used by school children should be marked with pedestrian crossing signs and pedestrian warning signs. Many counties and municipalities are currently installing new fluorescent yellow-green signs at all school crossings in an attempt to make them more visible to motorists.

_____ Town _____ (has or has not) updated the crossing signs in the areas surrounding its schools to the fluorescent yellow-green. Sign upgrades are still needed at the following locations:

1. _____ (*name of elementary, middle, high school or vocational school*)
2. _____ (*name of elementary, middle, high school or vocational school*)

Walk to School Routes

In the Town of _____, children _____ (*walk or are bused*) to school. There ____ (*is or is not*) an established "Walk to School Route" in each neighborhood. Crossing guards (or police officers) are present during the hours of _____ AM to _____ AM and _____PM to _____PM at the following locations:

1. _____ Street and _____ Avenue.
2. _____ Street and _____ Street.

("Walk to School Routes" can be obtained from the local school board.)

The most common problems around school zones are excessive speeding and too many cars where children cross streets or are picked-up and dropped-off. The Town of _____ strives to improve traffic safety for children in school zones with three types of solutions: education, enforcement and engineering.

Education alerts people to ways they can help ease safety problems by slowing down or traveling by bus, bicycle or foot, instead of automobile. A comprehensive traffic safety program _____ (*has or has not*) been developed for parents and children in the _____ Town school district to reduce traffic-related injuries and fatalities.

The Police Department focuses enforcement efforts around the schools, increasing awareness of school safety problems. Traffic officers use the following tools (*examples include traditional enforcement, an unstaffed trailer that monitors speeds, which are displayed on reader boards, as motorist pass, and photo radar*)

The _____ Town Engineer _____ (*is or is not*) investigating the implementation of a traffic calming program to reduce speed, decrease traffic volumes, and/or improve safety around _____ Town schools. School zone signs, beacons and signals are/aren't used at our local schools, but other common traffic calming techniques that should be/have been implemented are curb extensions, speed bumps and raised medians.

Improvement Plans, Programs & Studies

The municipal capital improvement plan is prepared on an annual basis. This plan is for _____ (*one/two/three/four/five/six*) years and is reviewed by the Planning Board and approved by the municipal council. The transportation portion of the capital improvement plan is prepared by the _____ (*municipal engineer/town*

council/town planner/other). There are ____ (#) projects in the current capital improvement plan that refer to pedestrian circulation.

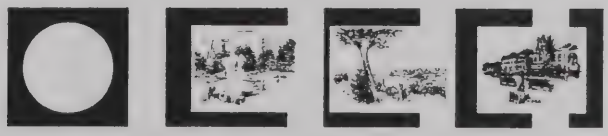
The County has a ____ (#) year capital improvement plan. The County plan is prepared annually and lists projects for the next ____ (#) years. The County plan is prepared by the Department of _____ and is approved by the County Freeholders at a public meeting. The County _____ (*solicits or does not solicit*) input from municipal representatives. The County plan has ____ (#) projects in their program that refer to pedestrian circulation that could impact our community. Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to pedestrian circulation.

Recommendations:
The following are action items to achieve the goals, policies and objectives relating to pedestrian travel in the Town of _____.

- Include pedestrian projects in the Capital Improvement Program.
- Identify and mitigate impediments and obstacles to walking to school.
- Implement pedestrian improvements as part of all transportation improvements, including road construction, reconstruction, traffic calming, and intersection improvements, wherever feasible.
- Require direct on-site pedestrian connections between new development and transit stops.
- Continue to work with NJ Transit and all regional transit carriers to ensure that adequate facilities are available at transit stops.
- Ensure that all projects in the Town of _____ conform to the NJDOT Pedestrian guidelines.
- Traffic calming techniques should be used as a tool to increase pedestrian safety and access.
- Encourage the inclusion of amenities, plantings and art in pedestrian improvement projects.
- Initiate/continue an annual program to install curb ramps at crosswalks throughout the town.
- Identify and improve pedestrian crossings in areas of high pedestrian use
- Analyze automobile-pedestrian crashes annually and work to reduce the incidences of automobile-pedestrian conflict.
- Work to ensure that vegetation in the right-of-way does not impede pedestrian travel.
- Work to establish a process for maintaining pedestrian connections such as connector pathways that are not on streets.
- Educate children about walking safely.
- Work with the Police Department to ensure that officers understand pedestrian issues.

- Work with the county or local Shade Tree Division to ensure that trees are included in the pedestrian environment while maintaining pedestrian function.
- Develop a program to construct sidewalks through public/private partnerships on existing streets without sidewalks.
- Apply for available grant funding for pedestrian improvement projects.
- Continue to require property owners to maintain sidewalks on a regular basis.
- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may include walk mode share, pedestrian facility mileage, poor sidewalk condition, pedestrian-friendly areas guidelines, etc.

The **Bikeways** section that follows is usually not found in most circulation elements. Since this is a mode of transportation that is gaining in popularity, bicyclists are a critical link in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you will probably find that the majority of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.



The Model Municipal Circulation Element

In the 2000 Census, the Town of _____ had a total of only ____ (#) persons commuting to work by bicycle. This is _____ (*down or up*) by ____ (#) from the 1990 Census. This trend is _____ (*typical of or different than*) the region and state as a whole. The total number of persons using their bicycle for their work trips makes up ____ (#) percent of the total work force.

(Census data can be found at http://www.census.gov, from the NJ State Data Center at http://www.state.nj.us/labor/lra/njsdc.htm, or from your local County Planning Staff)

Existing System

The bicycle is a low-cost and effective means of transportation that is quiet, non-polluting, extremely energy-efficient, versatile, healthy, and fun. Bicycles also offer low-cost mobility to the non-driving public, including the young. The world's 800 million bicycles outnumber automobiles two to one, and annual bicycle production is more than three times annual automobile production[1].

Throughout the United States today, the bicycle is making a comeback. There are an estimated 100 million bicycles in the country[2], including an estimated ___ (#) in the Town of _____. Bicycling as a means of transportation has been growing in popularity as many cities work to create more balanced transportation systems and reclaim streets from auto dominance[3]. In addition, recent national and local surveys find that many more people are willing to cycle more frequently if cities provide better bicycle facilities[4]. This has led to a growing recognition among policy makers at all levels of the need to treat the bicycle as a serious mode of transportation.

Bicycle Facilities

Because of the great difference in skill levels among bicycle riders, different types of bicycle facilities are needed to serve riders in New Jersey. Advanced bicyclists are best served by bicycle compatible streets and highways that have been designed to accommodate shared use by bicycles and motor vehicles. Basic bicycle riders will be especially interested in riding on bikeways that are designated facilities that encourage bicycle use. The difference between a compatible roadway and a designated roadway can be summarized as follows:

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[1] Lowe, Marcia, The Bicycle: Vehicle for a Small Planet, Worldwatch Institute, September, 1989: p.5.
[2] Bicycle Federation of America statistics.
[3] "Sports Participation in 1992, City-by-City," National Sporting Goods Association, 1992.
[4] Bicycle Facility Preference Survey, carried out by the City of Portland Bicycle Program, Spring 1994. "A Trend on the Move: Commuting by Bicycle," Bicycling Magazine, 1991.

Compatible Roadways: Roads with design features that allow a competent bicyclist to safely share the roadway with motor vehicles. Compatible roadway design guidelines differ based on traffic volumes, speeds and environmental setting. Because advanced bicyclists can be anticipated to use most of the roadways in the state, it is important that ***all*** roadways be designed to be compatible with bicycle use.

(NJDOT's Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines can be downloaded from the internet at http://www.state.nj.us/transportation/publicat/bike_guidelines.htm or can be obtained from the Bicycle/Pedestrian Advocate at NJDOT.)

Designated Roadways: Roads on which bicycle use is anticipated and invited through the use of lane markings, signage, maps or tour guides. Designated bicycle facilities provide greater safety for less experienced or less confident riders. Designated roadways are located where encouragement of bicycle use is desired, based on consideration of traffic conditions, pavement width and geometrics, as well as the appropriateness and directness of the particular route. They are also often located in areas that offer especially pleasing rides, such as in parks or through quiet subdivisions. Because basic riders will be more apt to be riding for pleasure, bikeways are often located in resort areas or in regional parks.

As indicated by these definitions, the designation of a roadway as a bikeway represents a proactive policy designed to encourage bicycling. The appropriate design treatment for a bikeway depends on motor vehicle traffic volumes and speeds and the street width. Three categories of bikeways exist in New Jersey:

Bicycle Lanes - A bicycle lane is that portion of the roadway designated by eight-inch striping and bicycle pavement markings for the exclusive or preferential use of bicycles. This is not to be confused with a shoulder bikeway, where the paved shoulder, separated by a four-inch stripe and no bicycle lane markings, is usable by bicycles. Although most shoulders can be used by bicycles, not all are wide enough or maintained for safe bicycle use. Auto parking may also be allowed on a shoulder.

Bicycle Routes - Roadways designated for bicycle use through the installation of directional and informational signage. Usually these are low volume roadways, with extra wide curb lanes, provided to give extra room for bicycle operation where there is insufficient space for a bicycle lane or shoulder bicycle lane. A signed connection is a bikeway upon which guide signing is placed to direct bicyclists to a

destination or another bikeway. Signed connections are used on local, low-traffic streets and on and around major recreational cycling destinations.

Bicycle Paths - An off-street path is a bikeway that is physically separated from motorized vehicular traffic by an open space or barrier. A bicycle path may be located within a highway right-of-way or on an independent right-of-way. It is not a sidewalk but may be designed to permit shared use with pedestrians. Off-street paths are intended to provide adequate and convenient routes for bicycling, walking and other non-motorized uses. They may be implemented in corridors not well served by the street system.

Bicycle Lanes

Bicycle lanes are striped along ____ (#) miles of the Town's roads. These lanes are marked with _____ symbols on the pavement and _____ signs along the roadway. Striped bike lanes are located along the following roadways:

- _____ (*name of road or street*)
- County Road ____ (*County Route* #), from milepost ___ (#) to milepost ___ (#)

Bicycle Routes

There are ____ (#) miles of signed bicycle routes within the Town of _____. These routes are marked with route signs and are located along the following roadways:

_____ (*name of road or street*)
_____ (*name of road or street*)
County Road ____ (*County Route* #), from milepost ___ (#) to milepost ___ (#)
State Highway ____ (*Route* #), from milepost ___ (#) to milepost ___ (#)

Bicycle Paths

There are ___ (#) off-road pathways provided for bicyclists in the Town of _____. They are:

_____ Path
The _____ Bikeway
The _____ Trail

Other Bicycle Facilities

The Town of _____ provides bicycle facilities such as bike racks, bike lockers, and _____, which can be found at the following locations:

_____ train station
_____ bus stop
_____ downtown parking lot
_____ elementary school
_____ apartments

Inventory

As of _____ (*date*), there were approximately ____ (#) miles of bicycle lanes and ____ (#) miles of off-street paths in the Town of _____. There were also approximately ____ (#) miles of signed bicycle routes directing cyclists on neighborhood streets. These existing bikeways are widely dispersed and do not form an interconnected network.

There are approximately ____ (#) miles of planned bikeways, meaning projects for which funding has been committed and construction will likely begin by _____ (*year*). The Bikeway Network Map identifies all existing and planned projects.

(Provide a map of the existing and proposed bikeway network.)

TABLE ____ (#) -- Existing and Planned Bikeway Network

Facility	Miles
Existing bicycle lanes	0.0
Existing off-street paths	3.5
Total existing bikeway miles	3.5
Planned bicycle lanes	2.3
Planned off-street paths	1.5
Total planned bikeway miles	3.8
Total existing and planned miles	7.3

The current and planned bikeways exist on a street system (city- and state-owned roadways within the Town of _____) that includes ____ (#) miles of paved streets. As of _____ (*year*), ____ (#) percent (____ miles) were local streets and ____ (#) percent (____ miles) were arterial streets. Approximately ____ (#) percent of _____ Town's streets have appropriate facilities.

New Jersey Department of Transportation Highways
There are close to ____ (#) miles of state-owned highways within city limits. These include _____. It is New Jersey Department of Transportation (NJDOT) policy that all roadways except limited access highways should be bicycle compatible. The Town will work with NJDOT to retrofit state roadways.

Improvement Plans, Programs & Studies
The municipal capital improvement plan is prepared on an annual basis. This plan is for _____ (*one/two/three/four/five/six*) years and is reviewed by the Planning Board and approved by the municipal council. The transportation portion of the capital improvement plan is prepared by the _____ (*municipal engineer/town council/town planner/other*). There are ____ (#) projects in the current capital improvement plan that refer to bicycle transportation.

The County has a ____ (#) year capital improvement plan. The County plan is prepared annually and lists projects for the next ____ (#) years. The County plan is prepared by the Department of _____ and is approved by the County Freeholders at a public meeting. The County _____ (*solicits or does not solicit*) input from municipal representatives. The County plan has ____ (#) projects in their program that refer to bicycle transportation that could impact our community.

Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to bicycle transportation.

Recommendations:
It is the goal of the Town of _____ to make the bicycle an integral part of daily life, particularly for trips of less than five miles, by implementing a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.

- Complete a network of bikeways that serves bicyclists' needs, especially for travel to employment centers, commercial districts, transit stations, institutions, and recreational destinations.
- Provide short- and/or long-term bicycle parking in commercial districts, along main streets, in employment centers and multifamily developments, at schools and colleges, in industrial developments, at special events, in recreational areas, and transit facilities such as light rail stations and park-and-ride lots.
- Encourage the private sector to provide showers and changing facilities for commuting cyclists.

- Increase the number of bicycle-transit trips by supporting _____ (*NJ Transit's "Bike Aboard" or PATCO's "Bicycle on Rail"*) program.
- Develop and implement education and encouragement plans aimed at youth, adult cyclists, and motorists.
- Increase public awareness of the benefits of bicycling and of available resources and facilities.
- Promote bicycling as transportation to and from school.
- Adopt NJDOT's *Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines* as part of the Town of _____'s Ordinances.
- Include bicycle projects in our Transportation Capital Improvement Program.
- Encourage NJDOT to retrofit State Highways to provide for bicycle use (except limited access).
- Apply for available grant funding for bicycle improvement projects.
- Improve signage for bicycle facility integrity and continuity.
- Improve bicycle safety and awareness of bicycle presence at locations that have a history of crashes involving bicycles and vehicles.
- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may include bicycle mode share, bicycle facility mileage, provision of bicycle facilities/amenities at transit hubs and other activity centers, etc.

The **Marinas** section that follows is rarely ever found in most circulation elements. Since this is a mode of transportation that is easily overlooked it is important that you include this in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you may find that the some of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.

The Model Municipal Circulation Element

The Town of _____ is located on the _____ (*name of body of water*). The _____ (*name of body of water*) is an important coastal area for _____ (*swimming, recreation, fishing*). Marinas in the Town of _____ serve the _____ County region's motor and sailboat populations. There are currently ____ (#) marinas located in the Town of _____.

Existing Facilities

_____ Marina is a _____ (*municipal, county or private*) facility located on the _____ (*body of water*), with its main entrance at _____ (*street address*). There are ____ (#) slips located here, for boats of up to ____ (#) feet in length. Slip depth is ____ (#) feet at low tide, with a width of up to ____ (#) feet. For the party boat or private day charter service, independent operators _____ (*are or are not*) located in the Marina. _____ (*outboard motor boats, row boats, sail boats, canoes, or sea kayaks*) are available on a day rental basis. *(where there are more then one facility this information should be listed for each one)*

_____ Marina provides services such as _____, _____, and _____ (*examples include floating slips, water and electricity, gasoline and diesel fuel, winter storage, long-distance hauling, docking services, lifts, boat ramps, repairs, or sewage pumpout facilities*). The marina also provides amenities such as _____ and _____ (*examples include a bait and tackle shop, parking, security, telephone or cable hookup, bathrooms, showers, or laundromats*).

There are _____ (#) sewage pumpout stations on the _____ (*body of water*), servicing more than _____ (#) harbored boats at _____ (#) marinas plus additional transient vessels. The New Jersey Department of Environmental Protection (NJDEP) is/isn't working in conjunction with the _____ planning council and various organizations to develop additional pumpout facilities by_____ (*date*).

Coast Guard facilities are located at _____ (*location*). They include _____, _____, and _____.

The New Jersey Department of Environmental Protection (NJDEP)

Through its Clean Vessel Program, DEP has instituted a cooperative program to fund and install boat sewage pumpout facilities. The Clean Vessel Program has enabled the DEP to establish No Discharge Zones designed to improve water quality along the New Jersey coast. The No Discharge Zone designation prohibits the discharge of treated or untreated sewage.

Establishing No Discharge Zones is part of DEP's Statewide Watershed Management Program to reduce non-point source pollution. The Marine Trades Association has been supportive of this effort, which has already improved water quality through the use of pumpout facilities and other actions. The pumpouts can handle many thousands of gallons of sewage over a summer that would otherwise pollute the rivers.

Improvement Plans, Programs & Studies

There are ____ (#) projects in the current municipal capital improvement plan that refer to marina and waterway management. The _____ (*year*) County capital improvement plan includes ____ (#) marina and waterway projects in their program that could impact our community. Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to marinas and waterway management.

Recommendations

- The Town of _____ should _____ (*establish an or expand its*) water monitoring program in the _____ (*name of body of water).*
- The Town of _____ should conduct an inventory of its sewage pumpout facilities.
- Sewage pumpout stations should be established at the following locations:
  - _____ (*name of dock, pier, marina or yacht club*)
  - _____ (*name of dock, pier, marina or yacht club*)
  - _____ (*name of dock, pier, marina or yacht club*)
- The Town of _____ should prepare a No Discharge Zone application for submission to the NJDEP to protect water quality in the _____ (*name of body of water affected*).
- The Dredging and/or Weed Harvesting Program should be _____ (*established or expanded*).
- Speed limits should be _____ (*lowered or raised*) in the _____ (*river, channel, harbor, or inlet*).
- A No Wake Zone should be established in the following locations…
- Quiet hours should be established between the hours of _____ PM and _____ AM at the following locations…
- Conflicts between motorized and non-motorized boats should be investigated at the following locations…
- Boat sizes should be limited at the following locations…
- Overnight parking should be _____ (*provided or expanded*) at the following locations…
- Bicycle racks and/or lockers should be installed at the marina
- Boat launches/ramps should be _____ (*installed or improved*) at the following locations…

- Additional winter storage should be installed at the following locations…
- Additional security should be provided at the following locations…
- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may be based on some of the above factors.

(If it is available, a map of existing facilities should be provided. The example shown here is from the Monmouth County town of Belmar, New Jersey on the Atlantic Ocean - http://www.belmar.com)

The **Transit** section that follows is usually not given much discussion in most circulation elements. Since this is a critical mode of transportation, transit planning is a critical link in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you will probably find that the majority of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.

The Model Municipal Circulation Element

Existing System Inventory

The public transportation in the Town of _____ includes a network of ____ (#) bus routes, a ____ (#)-mile commuter rail network, a ____ (#)-mile rapid transit network; a ____ (#)-mile light rail line, and a number of ferry services and park and ride facilities that complement the transit network.

Bus Service

In the 2000 Census the Town of _____ had a total of ____ (#) persons commuting to work by bus. This is _____ (*down or up*) by ____ (#) percent from the 1990 Census. This trend is _____ (*typical of or different than*) the region and state as a whole. The total amount of persons using the bus for their work trips makes up ____ (#) percent of the total work force. The total number of riders for each route by stop is shown below. There *are/aren't* sections of our community that are under served by bus service. Based on the adjacent transit supporting density table, areas in our community that are under served are the following: *(you should list the areas by neighborhood and show them on a map with the population density shown as well).* *(Detailed ridership data might be available from the local carrier, while census data can be found at http://www.census.gov, from the NJ State Data Center at http://www.state.nj.us/labor/lra/njsdc.htm or from your local county planning staff)*

Transit Supporting Densities People & Jobs Per Square Mile	
0 - 3,199	Transit not effective
3,200 - 4,999	Low frequency transit
5,000 - 10,499	Medium frequency transit
10,500 and higher	High frequency transit

The Town of _____ is served by NJ Transit and _____, (*name of bus company*) a private bus company. There are a total of ___ (#) different bus routes that serve our community. Most of the routes serve _____ (*name of a nearby town or city*). The commuting time to _____ (*same nearby town or city*) from our community is ____ (#) minutes and the round trip fare averages around $___ (#). Since times of departure, arrivals and fares change over time it is recommended that the local transit agency be contacted for the most up to date information. *(NJ Transit information on bus routes and schedules can be found at http://www.njtransit.state.nj.us/mainbus.htm)*

Ridership by Route and Stop					
	1992	**1994**	**1996**	**1998**	**2000**
Route #					
Stop 1	6	4	5	6	8
Stop 2	3	6	5	2	5
Stop 3	25	18	20	25	30
Total	**34**	**28**	**30**	**33**	**43**
Route #					
Stop 1	10	8	9	10	12
Stop 2	2	1	0	4	4
Stop 3	5	4	5	5	8
Total	**17**	**13**	**14**	**19**	**24**
Overall Total	**51**	**41**	**44**	**52**	**67**

Source: Local Transit Carrier

There are a total of ___ (#) bus stops located within our community. The locations of these bus stops are shown on the Transit Map. There are also ___ (#) of park-n-rides located within our community. Their locations are also shown on the above-referenced map. The map also shows the community facilities and destinations that these bus stops are located near. *(Provide a map showing locations of bus stops and park-n-ride lots in your town.)* Of the _____ (#) of bus stops that are located within our community _____ (#) have bus shelters, _____ (#) have bus stop signs and _____ (#) have sidewalks and crosswalks adjacent to them. *(This information could also be provided in a table form).*

Other Bus Carriers in New Jersey

In the appendix is a list by County of other bus carriers other than NJ Transit. (*Include in your circulation element the carrier that serves your community and, if available, a map of the routes and/or stops in your town.)*

Passenger Rail Service

In the 2000 Census the Town of _____ had a total of _____ (#) persons commuting to work by train. The _____ (*name of rail line*) Line is a well-established passenger rail system. This line serves communities from (*name of town at beginning of line*) to (*name of town at end of line*). The rail station that serves our community is located at _____ (*location*). _____ (*NJ Transit or PATCO*) operates this line which offers weekday service every _____ (#) minutes between the peak hours of ____ (*time*) AM and _____ (*time*) AM. The service is provided seven days a week, with limited service on holidays and weekends. Below is a table of ridership for the stations that serve this line. As noted below, ridership has been increasing over the past decade. A round trip fare for this train's service is $____ (*dollar amount*).

Central Train Station

(Maplewood train station - Maplewood web site.)

Ridership by Stop and Year - Morning Peak Hour Counts						
	1992	1994	1996	1998	2000	Average
Stop 1	430	470	424	523	614	***492***
Stop 2	53	41	65	99	64	***64***
Stop 3	2	0	0	2	2	***1***
Stop 4	452	457	425	457	595	***477***
Stop 5	404	368	333	427	462	***399***
Stop 6	28	31	19	33	56	***33***
Totals	**1,369**	**1,367**	**1,266**	**1,541**	**1,793**	***1,467***

Source: Local Transit Carrier

Since times of departure, arrivals and fares change over time it is recommended that the local transit agency be contacted for the most up to date information.

(Detailed ridership data might be available from the local carrier. Census data can be found at http://www.census.gov, from the NJ State Data Center at http://www.state.nj.us/labor/lra/njsdc.htm, or from your local county planning staff)

The parking lot at the train station has a total of _____ (#) spaces dedicated to permit parking and ____ (#) spaces dedicated to daily parking. Monthly permits cost $_____ (*dollar amount*) and can be obtained by contacting _____ (*either NJ Transit or the your town*). Daily parking costs $_____ a day.
(Information on the total number of spaces at a train station and the costs can either be obtained from the host municipality or NJ Transit)

Tickets for the train can be purchased at the station or on the train from the conductor. If the station is open, tickets must be purchased at the station prior to boarding or a surcharge is imposed. The station in _____ Town is open _____ (*day of week*) through _____ (*day of week*) from _____ AM (*time of day*) to _____ AM. *(NJ Transit information on trains and schedules can be found at http://www.njtransit.state.nj.us/mainrail.htm and PATCO information can be found at http://www.drpa.org/patco)*

Bicycles _____ (*are or are not*) permitted on passenger trains. Permits _____ (*are or are not*) necessary and may be obtained at _____ (*location or web site*).
(Bicycle and permit information can be found at http://www.njtransit.state.nj.us/bikeperm.htm for NJ Transit or at http://www.drpa.org/patco/bike.html for PATCO.)

Light Rail Service

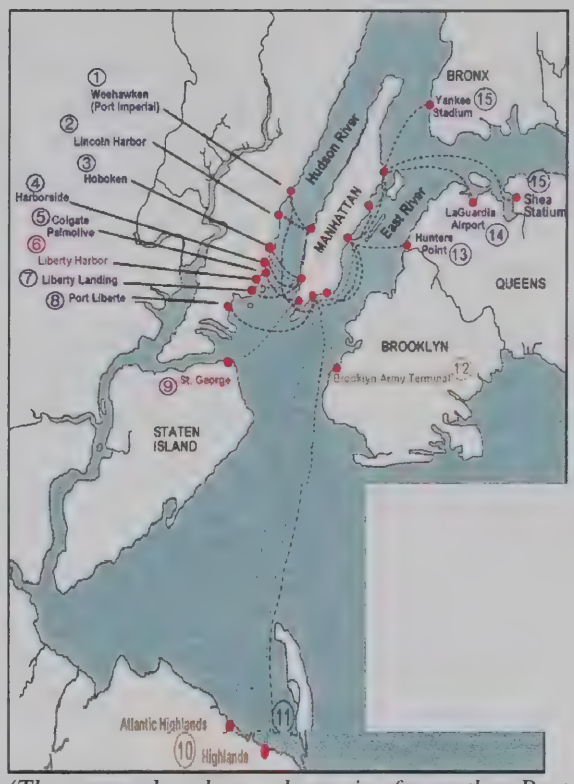
Light rail trains travel along tracks at street level. The _____Light Rail Line that runs through the Town of _____ runs from _____ (*first stop on the rail line*) in _____ (*name of town*) to _____ (*last stop on rail line*), where commuters can transfer to _____ (*PATH* http://www.panynj.gov/path/pathfram.HTM *or NJ Transit trains or a subway, bus, or ferry line*).

A one-way fare on the line is $____ (*dollar amount*), with a book of ___ (#) tickets available for $____ (*dollar amount*). A monthly pass costs $____ (*dollar amount*) for unlimited rides and also covers rides on nearby bus lines. Discount fares are available for seniors and the disabled. Bicycles _____ (*are or are not*) permitted on light rail trains. Permits _____ (*are or are not*) necessary and may be obtained at _____ (*location or web site*).

Ferry Services

The Town of _____ is served by the _____ Ferry. The ferry is an enjoyable option for commuting to work, enjoying a ball game, or visiting the tourist attractions of the _____ region. *(For more information on ferry services access the Port Authority website at http://www.panynj.gov/ferry/ferframe.HTM)*

The Town of _____ is also a co-sponsor of ____ (#) ferry services, _____ (*location or attraction*) to _____ (*location*) and _____ to _____. Other ferries are owned and operated by private services, such as _____ (*name of ferry company*) and _____ (*name of ferry company*). For directions, information and schedules call _____ (*area code and phone number*). Services, schedules, and fares are subject to change.



(The example shown here is from the Port Authority of New Jersey and New York)

Paratransit

Each of the 21 Counties in New Jersey provides county-based Paratransit service for Senior Citizens and People with Disabilities. NJ Transit assists in the provision of accessible services by the counties and non-profit agencies through the administration of the Casino Revenue's Senior Citizens and Disabled Residents Transportation Assistance Program, and Federal Transit Administration (FTA) Section 5310, 5311, and 5307 Programs. In the appendix is a list of services and phone numbers that provide specific information regarding the service in the Town of _____.

_____ County provides paratransit service for our community, operating a fleet of _____ (#) vehicles, ____ (#) of which are handicapped accessible. For detailed service, route, and fare information please contact The Division of Transportation at _____ (*area code and phone number*). *(Contact your County agency for detailed information on their service and provide it either here or in the appendices.)*

Taxi Service

_____ (*name of taxi company*) and _____ (*name of taxi company*) provide taxi service for our community. These services can be obtained by calling _____ (*phone number*) or _____ (*phone number*). Taxi fares are based on the distance of your destination.

Shuttle Services

The _____ Shuttle commuter bus services the Town of _____ and its neighbors, _____ (*name of town*) and _____ (*name of town*). This service is funded by a federal/state bus grant program and is locally supported by the towns mentioned above as well as by _____ County. It is operated by a private bus company under contract with _____ (*name of town or county*), that administers the bus grant program.

The shuttle service operates during the morning and evening rush, Monday through Friday, except on New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Thanksgiving and Christmas. Shuttle buses pick up commuters at any one of numerous roadside locations throughout the Town of _____ and drop them off at _____ (*location*), where they may catch a _____ (*train, bus, ferry, etc.)* to _____ (*location*).

Plan Recommendations

After reviewing the existing inventories of our mass transit facilities, deficiencies became evident. Recommendations for improvements are as follows:

- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may include transit-supporting population densities, transit level of service based not only on capacity, but also on headways (time between service), and other service characteristics, etc.

Bus Service

- More buses should be provided during morning and evening peak hours along the following routes….
- The following routes should be expanded….
- The following routes should be established….
- Bus shelters are needed at _____ (#) stop locations. These locations are as follows…..
- Sidewalks are needed at _____ (#) stop locations. These locations are as follows…..
- Crosswalks are needed at _____ (#) stop locations. These locations are as follows…..
- Better lighting is needed at ____ (#) stop locations. These locations are as follows…..
- Bus route information signs at the bus stops should provide maps or other graphics to present more information regarding the route. A bus route sign project should be undertaken by _____ (*name of agency*).
- Information regarding the price of the fares is needed at the stops.

- The park-n-ride lot at _____ (*location*) needs to be expanded.
- A new park-n-ride lot should be planned for _____ location.
- Better signage indicating the agency responsible for security and maintenance, and providing emergency phone numbers, is recommended at the following park-n-ride lots....
- Bicycle racks are needed at ____ (#) stop locations. These locations are as follows.....
- Bicycle lockers are needed at ____ (#) stop locations. These locations are as follows.....
- An increase in land use density (via zoning ordinance) should be considered at ____ (#) stop locations. These locations are as follows.....

Passenger Rail Service

- Better sidewalks are needed in and around the train station at _____ (*location*).
- Benches are needed at the following locations at _____ Station....
- Enhanced crosswalks are needed at the following locations.....
- More trains are needed during rush hour.
- More trains are needed during weekends and holidays.
- Automated ticket machines are needed at the train station.
- High level platforms are needed at the station.
- An increase in land use density should be considered adjacent to the train station.
- Bicycle racks are needed at the station.
- Bicycle lockers are needed at the station.
- Landscaping at the train station should be improved and maintained.
- The station building needs to be maintained.
- The pedestrian tunnel under the train tracks needs to be cleaned and better lit.
- The pedestrian bridge over the tracks needs to be better maintained.
- Better lighting is needed on the platforms.
- A dedicated pick-up and drop-off area is needed adjacent to the station.
- Trail blazing signs at the station are inadequate. Better maps and more local information should be provided on the signs.

Light Rail Service
(*same as Passenger Rail Service*)

Ferry Services
(*same as Passenger Rail Service*)

Paratransit

- The Town of _____ should coordinate with the county to assist with this service.
- The Town of _____ should identify and survey it's elderly and disabled population to gauge it's needs for paratransit

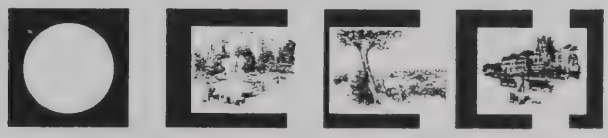
Taxi Service

- An inventory of taxi services and service areas should be performed to assess the need for additional services.
- Twenty-four hour service is needed at the following locations...
- Airport service is needed from the following locations...
- Taxi licensing reviews should be performed by the _____ Town Police Department.

Shuttle Services

- Whether they arrive at the park & ride by bus, car or on foot, shuttle commuters are pedestrians who need proper facilities such as sidewalks, curb ramps, crosswalks and shelters.
- Signs should be provided to identify facilities and warn motorists to be aware of pedestrians in the area.
- Transit stops should be comfortable, convenient, and well maintained. Proper lighting is also important.

The **Aviation** section that follows is rarely ever found in most circulation elements. Since this is a mode of transportation that is easily overlooked it is important that you include this in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you may find that the some of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.



The Model Municipal Circulation Element

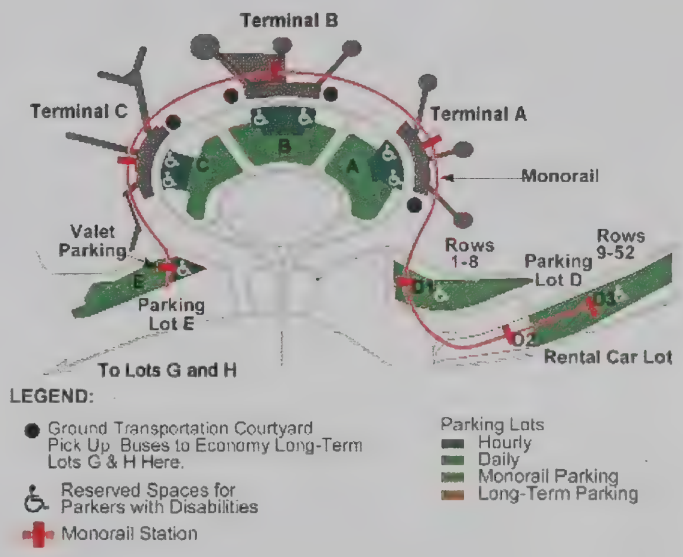
Existing System

Air Service

Aviation is a component of the transportation network in the Town of _____. It includes all forms of air transportation, from helicopters to commercial airlines. There are ____ (#) commercial airports, ____ (#) public airports, ____ (#) privately owned airports, and a military base in the region. There are also ____ (#) heliport and helistop facilities located in _____ Town, which are for private, corporate, emergency, or official use.

International Airports

Hosting approximately ____ (#) national and international airlines. _____ International Airport is located approximately ____ (#) miles from downtown _____ (*name of town*). Situated on _____ (#) acres, the Airport consists of _____ (#) terminals and _____ (#) runways: _____ (*# of runway*) at _____(#) feet in length; _____ (*# of runway*) at _____(#) feet ; and _____ (*# of runway*) at _____(#) feet.



Newark International Airport

Handling _____ (#) takeoffs and landings in _____ (*year*), _____ Airport processed _____ (#) passengers. Approximately _____(#) scheduled passenger carriers and non-scheduled charters serve more than _____ (#) domestic and international destinations daily. Its major passenger carrier is _____ Airlines, which uses the airport as its hub. There are ____ (#) separate airline passenger terminals at _____ International Airport. A _____ (*bus or monorail system*) provides service 24 hours per day between these terminals, parking lots, and the rental car complex.

In addition, ____ (#) all-cargo airlines handle _____ (#) tons of freight annually. Several cargo areas are located at the airport including the _____ Cargo Complex, FedEx Cargo Complex, United Parcel Service, and ____ (#) buildings at the _____ Cargo Center, which include ____ (#) cargo terminal buildings and a cargo service building.

Commercial Airports

_____ Airport is located _____ on over ____ (#) acres at _____ (*location*). This airport offers some commercial service with _____ Airways,

_____ Airlines, and _____ Aviation offering scheduled flights. _____ Airport also supports minimal cargo transport. Its _____ (#) major runways are _____ feet and _____ feet long. Last year over _____(#) passengers used the _____ Airport.

OR

_____ Airport, located outside of _____ Town offers an alternative to the large commercial regional hubs of Philadelphia and Newark International Airports. Commercial flights at _____ Airport are offered by _____ Airlines. _____ Airport has one _____(#)-foot and one _____(#)-foot runway. It is located on _____ (#) acres of land, with _____ (#) aircraft currently based there. By 2020, operations are expected to be at _____ (#) movements with _____ (#) aircraft based at the airport.

OR

The Town of _____ is home to a county airfield. Located at _____ (location), _____ County Airport is owned and operated by _____ . It is classified as a general aviation airport, and is has _____ (#) based aircraft and _____ (#) movements a year. _____ Airport, located on _____ (name of roadway), is capable of handling airplanes as large as the Boeing 727 and 737. The _____ Airport has two 150-foot wide laved runways, ___ (#) thousand and ___ (#) thousand feet long. Its control tower operates from ____ (time) AM to _____ (time) PM. There are ____ (#) aircraft currently based at the airport. Table _____ (#) shows the number of flights over the last ____ (#) years. _____ Airport is located on _____ (*name of roadway*) and operates 24 hours a day. It is equipped with a ____ (#) thousand-foot paved runway used by small passenger planes. In _____ (*year*), there were _____ (#) aircraft based at the _____ Airport.

Table _____ (#)
Number of Arriving and Departing Flights (in thousands)

Facility	1996	1997	1998	1999	2000
Newark International Airport	439	437	421	431	448
JFK International Airport	334	344	340	338	346
La Guardia Airport	337	338	345	323	368
Teterboro Airport	188	192	186	184	187

Reliever Airports

Reliever airports are general aviation airports that are intended to relieve congestion at nearby commercial airports. These airports provide the same service as general utility airports. _____ is classified as a reliever airport and has one ____(#)-foot runway that serves the ____ (#) aircraft that are based there. The 2020 operations and based aircraft are projected to be ____ (#) and ____ (#), respectively. On the site, leasing and rental are available as well as limited storage and hangar capacity.

Other Aviation Facilities

In addition to the airports mentioned above, the Town of _____ is home to a few small publicly owned and privately owned and operated airports, which serve private passenger, agricultural, and/or commercial charter and freight aircraft. They are as follows:

Name and Location of Facility	Public or Private	Number of Movements (in thousands)	Number of Based Aircraft	Number of Runways	Passenger or Cargo
Solberg Hunterdon Airport	Private	36	101	3	P
Morristown Municipal Airport	Public	256	351	2	P
Millville Municipal Airport	Public	85	109	2	P
Little Ferry Seaplane Base	Public	0.5	1	1	P
Bader Field	Public	14	11	2	P
Allaire Airport	Private	66	219	2	P/C

Connecting Transportation Services

Major roadway access routes to the airport include _____ (*list local or county roads, state highways or interstates that lead to the airport*). NJ Transit operates a number of public bus routes that connect _____ Airport directly with certain destinations in New Jersey. The following NJ Transit bus routes stop at Terminals ____, ____, and ____ :

Route Number	Route Stops
37	NJ Transit bus to Maplewood, Irvington, and Newark
67	NJ Transit bus to Weehawken, Newark, and Toms River
302 (Airlink)	NJ Transit bus to Newark Penn Station/Broad Street Station *

*This bus is configured to carry luggage easily.

In addition, rail service to the Airport is available on the _____ (*name of rail line*) Rail Line _____(*# of train*) train that operates from _____ (*time*) AM until _____ (*time*) PM daily, every ____ (#) minutes, with easy connections to AMTRAK at

_____ Station. Connections to other New Jersey Transit bus and rail service are available at _____ , _____ and _____(*list locations*).

Airport visitors can take advantage of _____ types of Airport parking: (short-term, long-term, garage, economy, etc.). Most major credit cards are acceptable forms of payment for parking in these lots. Valet Parking is also available. The On-Site Valet drop-off is located in front of Terminal ____ (*name of terminal*). Daily rate is a flat $_____ (*dollar amount*).

Passengers with rental car reservations should take the appropriate rental car company shuttle departing from Zone ____ (#) outside the baggage claim area. For passengers without rental car reservations, courtesy phones for each of the rental car companies are available in each of the baggage claim areas.

Improvement Plans, Programs & Studies

There are ____ (#) projects in the current municipal capital improvement plan that refer to aviation within the Town of _____. The County capital improvement plan has ____ (#) projects in their program that refer to aviation that could impact our community. Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to aviation.

- Municipal (transportation)
- Municipal (land use development)
- County
- State (NJDOT)
- Inter-modal enhancements

Recommendations

The aviation industry contributes to the county's economic well being. Continued operation of these facilities will positively impact the county's future. In order to support operation of the county's airport and helicopter facilities, the following is recommended:

- Monitor any proposed changes in county aviation facilities and services.
- Encourage mitigation of noise pollution.
- Ensure that all safety regulations are obeyed at air facilities.
- Improvements be made to keep up with current safety standards
- Extensions of service where needed and necessary
- Facility improvements (locations)

- Inter-modal enhancements (roadway, rail, airport) to help get people to the airport and back home again
- Develop benchmarks – standards or measurements with which your community can gauge current and future compliance/noncompliance with overall plan goals. These may include mode share-to-airport – bus-to-plane, train-to-plane vs. auto-to-plane.

Examples:

A $__ million renovation and improvement project is planned/recommended, including _____ (examples include a new FAA tower, a general aviation terminal, a restaurant, a flight preparation room, a pilot lounge, an executive conference room, or new open bay hangars providing an additional ____ (#) square feet of hangar space.)

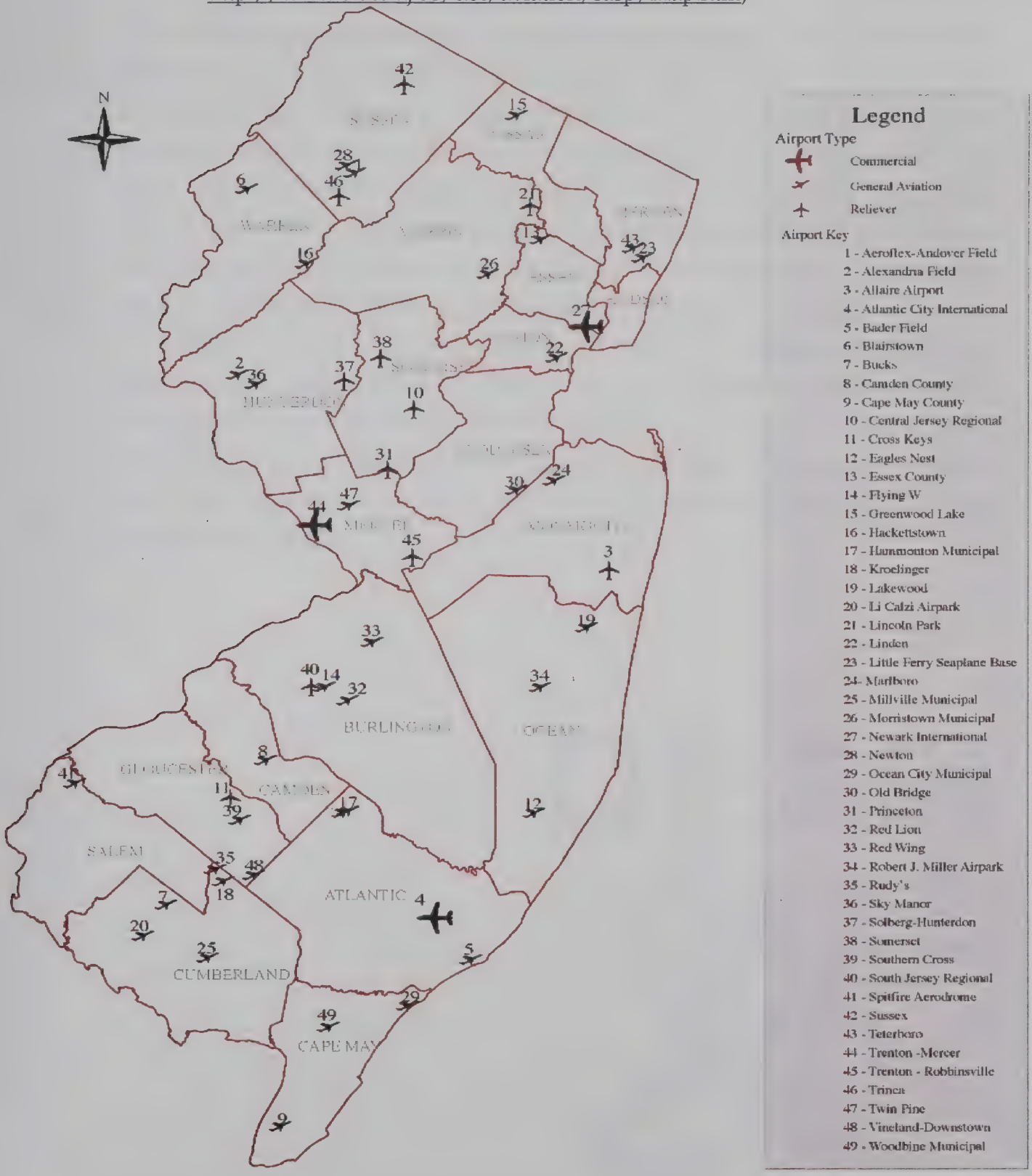
OR

As _____ Airport positions itself as a premier transportation facility, the Town of _____ is aggressively pursuing programs to enhance the scope as well as overall level of service to the traveling public. From the installation of information booths to the implementation of an Airport-wide customer courtesy campaign, _____ Airport is fully committed and dedicated to the improvement of service levels.

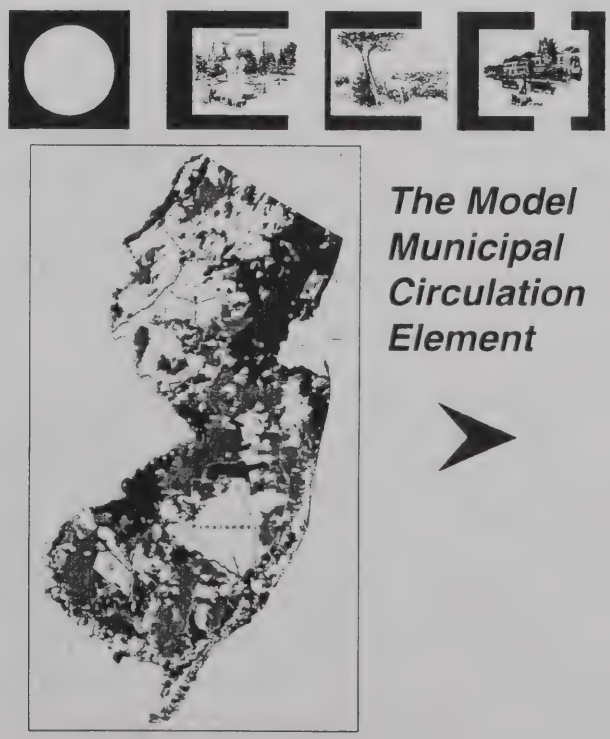
Complementing these initiatives is a major capital improvement program that includes:

- the consolidation of Terminals B and C, completed in _____ (*month, year*);
- the establishment of a new food, beverage and retail gallery with name-brand products and services, opened in _____ (*month, year*);
- construction of a new _____ (#)-ft., $_____ (#) million commuter runway, Runway _____ (#), opened in _____ (*month, year*);
- a new $_____ (#) million, _____ (#) square-foot, ____ (#)-level international terminal with ____ (#) new widebody international gates - Terminal _____ (*name of terminal*) scheduled to be completed by the end of _____ (*year*); and
- a new $____ (#) million, _____ (#) square-foot regional terminal that will accommodate commuter and turbo-prop aircraft - Terminal _____ (*name of terminal*) scheduled to be completed at the end of _____ (*year*).
- A parking facility overhaul that includes an additional _____ (#) spaces.

AIRPORT SYSTEM MAP
(courtesy of NJDOT
http://www.state.nj.us/dot/aviation/sasp/Map.htm)



The **Goods Movement** section that follows is usually not given much discussion in most circulation elements. Since this is a critical part of the economy, goods movement planning is a critical link in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you may find that the some of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.



Moving freight, like raw materials and finished products, is an area of increasing importance to New Jersey. Businesses, jobs, and consumers all rely on it. The key is to devise regional goods movement strategies that will facilitate the flow of freight and minimize adverse impacts on local communities like the Town of _____. A freight movement system includes the highway network, a rail freight network, maritime ports, air cargo facilities, and freight transfer facilities.

These elements of the transportation system are connected through numerous intermodal facilities. An intermodal transportation facility is a transportation hub that connects different modes serving intrastate, interstate, or international movement of people and goods. Because of the critical role these facilities play, they are vital components to economic vitality and growth.

The goods movement industry is a major user of the transportation network in _____ County and throughout the state. Because of the county's extensive transportation network and proximity to markets, this industry is key to its economy. Trucks are the dominant mode of freight transportation in _____ County, carrying approximately _____- (#) percent of all freight moved. However, rail, air and waterborne freight also play a vital role. Goods movement in _____ County consists of two types: overhead and originating/terminating. Overhead freight only passes through the county, while originating/terminating traffic either begins or ends its trip within the county.

Within _____ Town's borders are _____ (*railroads, motor-freight transport facilities, deep-water shipping ports, container-ship facilities, dockside warehouses, factories/manufacturing centers*). All play an important role in the export of goods to world markets and in importing raw materials and finished products for distribution throughout the East Coast and other regions of the United States.

Improvement Plans, Programs & Studies

The municipal capital improvement plan is prepared on an annual basis. This plan is for _____ (*one/two/three/four/five/six*) years and is reviewed by the Planning Board and approved by the municipal council. The transportation portion of the capital improvement plan is prepared by the _____ (*municipal engineer/town council/town planner/other*). There are ____ (#) projects in the current capital improvement plan that refer to goods movement.

The County has a ____ (#) year capital improvement plan. The County plan is prepared annually and lists projects for the next ____ (#) years. The County plan is prepared by the Department of _____ and is approved by the County Freeholders at a public meeting. The County _____ (*solicits or does not solicit*) input from municipal

representatives. The County plan has ____ (#) projects in their program that refer to goods movement that could impact our community.

Since our community is in _____ County, the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to goods movement.

TRUCK FREIGHT

Existing System Inventory

The extensive highway system in _____ County, where the Town of _____ is located, has been a factor in the amount of truck traffic to and through the area over the last ____ (#) years. Trucks have benefited from the technological advances made during the 1970s and 1980s with stronger suspensions, better tires, and light materials, allowing them to transport heavier loads more efficiently.

There are ____ (#) major motor freight carriers located in or near the Town of _____ , including _____ *(name of trucking company)* at _____ *(location of trucking company)* and _____ *(name of trucking company)* at _____ *(location of trucking company).* These motor freight carriers move goods within and outside the county.

It is necessary to plan for the continued growth of trucking in and through the area. The added truck volumes and the delays caused by congestion and an inadequate transportation network for extensive freight traffic are issues that need to be continually addressed.

Recommendations

Truck traffic movements in some locations may be legally restricted due to excessive grades or curves, bridge weight limitations, and insufficient height or weight clearances. In order to maintain safe and efficient truck travel through the Town of _____ , it is important to implement the following:

- Coordinate with the county and state to identify major truck routes through and around the Town of _____ .
- Identify existing or future roadway features that are unsafe or limit the passage of trucks.
- Correct the roadway deficiencies noted above.
- Construct truck climbing lanes on roadways as needed.
- Increase the number of roadside inspections of large vehicles.

- Increase the monitoring of the truck self-inspection program.
- Increase enforcement of motor vehicle violations by trucks and other large vehicles.

Rail Freight

Existing System - Inventory

The major rail freight carriers in New Jersey are CSX, Norfolk Southern, and Conrail. _____ County, where the Town of _____ is located, is served by _____ (#) freight railroads. _____ (*name of rail line*) provides freight service on all of the NJ Transit-owned lines in _____ County. The _____ Railway, a medium-sized regional railroad, provides freight service over two lines in _____ County. The main line of the _____ Railway skirts the northern border of the county for _____ (#) miles from _____ (*name of town*) through _____ (*name of town*). The _____ Line's _____ track serves _____ (*name of town*) and _____ (*name of town*). The _____ Railway, a short-line operation based in _____, provides freight service over _____ (#) miles of track on four different rail lines in _____ County including the _____ Line, the _____ Branch, and the county-owned lines of the _____ Branch.

The majority of rail freight moving through _____ County is primarily container freight on the _____ Line. In _____ (year) through traffic on this line was ____ (#) railcars transporting _____ (#) intermodal containers. Additionally, _____ (#) freight cars were transported through the county in _____ (*year*) and originating/terminating traffic amounted to _____ (#) loaded freight cars serving ___ (#) firms in the county.

OR

Rail service does not exist in the Town of _____. The _____ Railroad right-of-way has been abandoned and is now under consideration for use as a _____ (*examples include a light rail line or a multi-use path or trail*).

OR

CSX and Norfolk Southern have recently acquired the Conrail lines in _____ County and have shared rights to these lines in this area. Their lines generally tend to follow the Delaware River to the various ports. One line also travels into the Southern Jersey shore area. There is also a smaller freight operator, Southern Railroad of New Jersey.

Only ____ (#) rail freight rail lines serve the _____ Town area; the remnants of a once extensive system which linked _____ and _____. Today, daily freight service is provided on the _____ Line between _____ City and the Town of _____. This route forms the core of NJ Transit's proposed _____ Light Rail transit line, which, when completed, would coordinate its operations with freight. Local freight service is also provided as far as the Town of _____ on the _____ Track. Service on this line has recently been _____ (*increased or decreased*) from ___ (#) days a week to ____ (#) days per week.

OR

_____ County, where the Town of _____ is located, hosts multiple freight rail facilities, including Norfolk Southern, CSX, and the Canadian Pacific Line. The county is currently looking to improve freight facilities by adding temporary storage and warehouse facilities, some of which will be located in _____ Town.

The _____ Town region has more than _____ (#) intermodal rail terminals, served by three Class I railroads -- Canadian Pacific Railway, CSX, and Norfolk Southern. These railroads connect markets throughout the eastern United States and Canada, providing daily, double-stack rail service.

Recommendations

Increasing the availability of rail freight can effectively reduce truck traffic on local roadways. The use of rail freight may be a more economical mode of transporting large amounts of materials and will result in a longer life for road surfaces and bridges.

In order to support goods movement on railroads, the following is recommended:

- Improve marketing efforts to attract rail customers along the _____ Rail Line. Some opportunities include _____ , _____ , and _____ (*list available or abandoned properties*).
- Implement land use policies that encourage industries to locate adjacent to existing freight lines.
- Encourage the continuation of service and rail use on the _____ Railway.
- Lobby to preserve or restore freight service where feasible.

- Coordinate with the county and state to ensure that safety issues at all rail crossings in the Town of _____ are addressed.
- Promote a multi-agency private/public partnership.

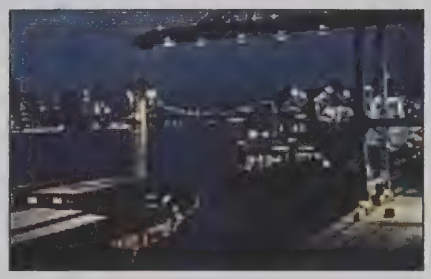
WATERBORNE FREIGHT

Existing System - Inventory

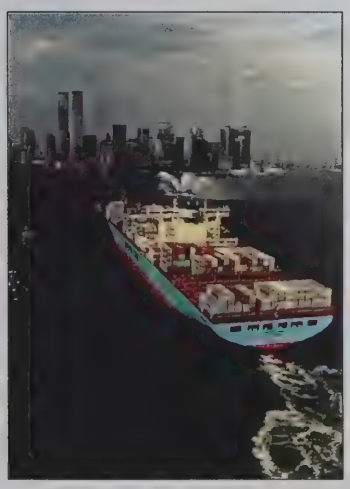
Although there are no marine ports within the Town of _____, marine freight is vital to its economy. Port _____ and Port _____, located approximately _____ (#) miles _____ (*north, south, east, or west*) of the Town of _____, are among the nation's largest importers of containerized freight. The containers can either be shipped by rail or by truck to their final destination. The _____ (#) containers shipped through _____ County on the _____ Rail Line originated or terminated at these ports. Container goods are also delivered by truck directly to or from _____ County (where the Town of _____ is located) by way of these ports.

Ports

The Port of _____ is managed by the Port Authority of _____. The _____ Marine Terminal complex, the _____ Marine Terminal, the _____ Piers and _____ Container Terminal handle most of the cargo. In addition, there are private operators such as _____ Marine Terminal and a number of other terminals operated by _____.



There are _____ (#) major container terminal operators that serve the Port of _____, including _____ and _____. Major facilities in the Port complex include _____, _____, and _____ (*examples include refrigerated storage space, bulk liquid handling for edible grades of fats and oils, a high-tech copper rod production plant, two orange juice concentrate storage and blending facilities, two auto preparation centers, and several bulk cargo handling facilities for gypsum, scrap metal, cement, and salt*).



The _____ Terminal includes ____ (#) container cranes serving ____ (#) fully equipped containership terminals, ____ (#) distribution buildings with more than ____ (#) square feet of space and numerous other terminal buildings. ____ (#) major container operators serve the _____ Terminal, _____ (*name of company*), which operates a terminal

with ____ (#) cranes on ____ (#) acres and _____ (*name of company*), which runs ____ (#) terminals of approximately ____ (#) acres, miscellaneous buildings and ____ (#) container cranes.

The _____ port region has ____ (#) intermodal rail terminals, served by ____ (#) Class I railroads -- _____ Railway, _____, and _____. These railroads connect markets throughout the eastern United States and Canada, providing daily, double-stack rail service. Thousands of trucking companies also serve the Port of _____ with access to several interstate highways.

It is estimated that ____ (#) tons of freight pass through the Port of _____ daily. Projections indicate that that this amount will _____ (*increase or decrease*) by ____ (#) percent in the next twenty years.

Plan Recommendations

- Inventory location of waterborne freight related land uses
- Identify and locate waterside under utilized or brownfield sites
- Enhance road side facilities to promote the waterborne freight uses
- Promote dredging to ensure waterborne freight stability

AIR FREIGHT

Existing System Inventory

There _____ (*is or is no*) air freight service located at the airports within the Town of _____. The predominant air cargo facilities in the region are _____ Airport in _____ (*name of town or county*) and _____ Airport in _____ (*name of town or county*). Table ____ (#) shows the tonnage of domestic and international freight originating or terminating at these ____ (#) airports in 19___ (*year*). Altogether, _____ (#) million tons of air cargo were handled. _____ Airport, the largest air freight terminal, transported ____ (#) tons of international freight and ____ (#) tons of domestic freight. _____ Airport is the largest domestic air freight terminal in the region, transporting _____ (#) tons of freight, and is a primary hub of overnight freight.

Table _____ (#) 1999 (*year*)
Air Cargo Activities at the Regional Airports for the Town of _____ (thousands of tons)

Airport	Domestic	International	Tons
Newark International Airport	742	366	1,108
JFK International Airport	526	431	957
La Guardia Airport	61	13	74
Total	1,329	810	2,139

The major airports listed above are an important link to the town's economy. Convenient highway access to these airports is essential to ensure the economic well being of local businesses that depend on air freight transportation.

The Foreign Trade Zone

A major destination of international goods from the regional air and marine ports is the Foreign Trade Zone in _____ (*name of town*). The Foreign Trade Zone is a designated business district where import duties on merchandise can be deferred, reduced, or eliminated.

This Foreign Trade Zone, one of only three in the state, is a _____ (#)-acre section of the ____ (#)-acre _____ International Trade Center Industrial Park. The Foreign Trade Zone site has excellent accessibility to the regional air and marine terminals because of its direct access to _____ (*name of highway*). In addition, the _____ freight rail line bisects the industrial park. The success of the Foreign Trade Zone and the International Trade Center represents the advantages of efficient freight transportation in industrial location.

Plan Recommendations

- Inventory the amount of air freight that is dependent upon _____ airport
- Discuss with air freight companies their land use related needs in the community
- Ensure that truck routes to the airport are accurate and signed

The **Transportation Demand Management** section that follows is usually not given much discussion in most circulation elements. Since this is a critical area of transportation planning it should be in your circulation element. In this section you will find blanks to be filled in by you and some sample tables. You may come across areas that do not apply to your community, these sections should then be skipped but, you will probably find that the majority of this section does apply. The sample tables are examples of the kind of information that you should consider to include in your own communities' plan. The graphic images in this section makes the document more user friendly which in turn will help to encourage the public at large to pick up and read your document. The more members of your community that are aware of the master plan the easier it will be to implement your goals and recommendations.

The Model Municipal Circulation Element

Since it has become harder and harder to widen roads in order to reduce congestion other methods in reducing total vehicle trips/congestion have gained momentum. The following section of our circulation element discusses the background of the legal reasons why these programs began and why they are continuing today in our region and in our community.

Existing Transportation System

The Clean Air Act

The original Clean Air Act (CAA) was passed in 1963, but our national air pollution control program is actually based on the 1970 version of the law, which created the basic framework surrounding national air quality control. The Act was moderately revised in 1977 and then again more severely in 1990. It was during the 1990 revision that the specific amendments were passed regarding the emissions from stationary and mobile sources, acid rain-causing pollutants, nationwide air permitting programs, and ozone protection. The overall objective of the 1990 revision was to reduce toxic admissions thereby allowing for an overall air quality improvement by the year 2010. During this revision the Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) which are the maximum allowable concentrations of the particular "negative" pollutants such as: carbon monoxide, sulfur oxides, nitrogen oxides, ozone, lead, and particulate. The maximum allowances of these substances are based on primary and secondary standards: Under the close supervision of the EPA and pursuant to the CAA every state was to create and invoke a policy known as State Implementation Plans (SIPs). New Jersey is part of region 2 of the Environmental Protection Agency. (*website address: http://www.epa.gov/region02/njlink.htm#nj*).

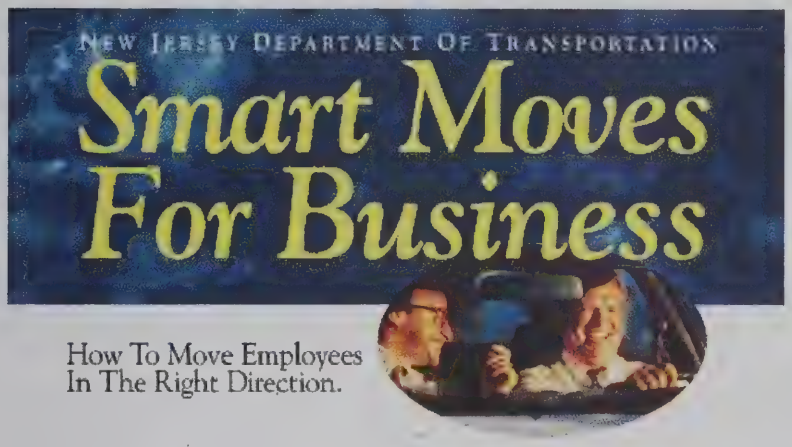
EPA United States Environmental Protection Agency REGION 2 New Jersey, New York, Puerto Rico & U.S. Virgin Islands

If you want to find out more about local air quality it can be obtained by going to the New Jersey Department of Environmental Protection Bureau of Air Monitoring website at *http://www.state.nj.us/dep/airmon/index.html*. The CAA designated two areas of New Jersey that are in non-attainment areas. The measured levels of ozone in these areas were high enough that these areas were classified as having a "severe" ozone problem. These non-attainment areas are the portion of New Jersey in the New York, Northern New Jersey, Long Island ozone non-attainment area, and the portion of New Jersey in the Philadelphia, Wilmington, Trenton ozone non-attainment area. These two severe non-attainment areas involve 18 of New Jersey's 21 counties and contain approximately 95 percent of the State's population. The counties located within the Northern New Jersey non-attainment area are: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, and Union. The counties within the Trenton non-attainment area are: Burlington, Camden, Cumberland, Gloucester, Mercer, and Salem. The three counties that are not included are Atlantic, Cape May, and Warren. Since our

community is located in _____ County it ____ (*is or is not*) located within a non-attainment area.

Employee Trip Reduction

The CAA did/did not mandate reduction deadlines for our area beginning in 1993 and continuing on until 2010. It was mandated by the CAA that non-attainment areas institute Employer Trip Reduction Programs, meaning that all employers with 100 or more employees at a particular site must institute programs to reduce work related vehicle trips and miles traveled by their employees.



In compliance with this mandate, governments and employers throughout the state of New Jersey, and in our community created and implemented Employee Commute Options. In 1995 the Clean Air Act [section 182 (d) (1) (B)] was amended by Congress, and then signed into law by the President. The amendment of the legislation increased the flexibility of states by allowing them to, "*remove the implementation plan, or withdraw its submission, if the state notifies the Administrator, in writing, that the state has undertaken, or will undertake, one or more alternative methods that will achieve emissions reductions equivalent to those to be achieved by the removed or withdrawn provisions.*" Although there was no legislation enforcing the Employee Commute Plan, state and county governments along with employers in New Jersey continued to promote commuting alternatives, making it in effect a *voluntary* state program known as Smart Moves for Business (SMFB).

The SMFB program is facilitated by the New Jersey Department of Transportation (*http://www.state.nj.us/njcommuter/html/smartbus.htm*) with the cooperation of participating companies. The SMFB program offers employees choices for their commute instead of the typical single occupancy vehicle. Some of the options in the program are carpooling, telecommuting and flexible work hours. The more use we can get out of our existing road space is not only beneficial for clean air but it also benefits our community. By creating more capacity through management techniques it allows our community to grow without having to widen roads and possibly take private property and businesses.

The following types of trip reduction techniques are used in our community:

- Parking Pricing
- Limited provision of on-site parking (reduction in parking requirement for certain types of developments like transit oriented developments)
- Demand responsive shuttles
- Guaranteed Ride Home
- Compressed Work Schedules
- Flextime/shift work
- Financial Incentives
  - Transit pass programs - MetroChek
  - Parking discounts for rideshares
  - Indirect incentives - paid time off, discount coupons, meal vouchers, etc.
- Bicycle storage facilities and locker room facilities
- Telecommuting
- Rideshare matching assistance
- Vanpooling
- Employer shuttles for transit stops
- Preferential parking

The following companies located within our community have active employer trip reduction programs:

1. _____ *(name of company and program contact information)*
   _____
   _____

2. _____ *(name of company and program contact information)*
   _____
   _____

3. _____ *(name of company and program contact information)*
   _____
   _____

Transportation Management Association (TMA)

The TMA that serves our community is _____. Its mailing address and phone number is _____ and its website address is _____.

Below is a table of all the TMA's in New Jersey. TMA's are non-profit organizations of employers and government that work together to solve local transportation issues. For a list of services that our TMA provides please contact them or visit their website.

TMA	Area Served	Address	Phone Number	Website
Cross-County Connection	Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem Counties	2002 D Lincoln Drive West, Marlton, NJ 08053-1530	(856) 596-8228	http://www.ridesharenj.com
Greater Mercer TMA	Mercer County	15 Roszel Rd. Princeton, NJ 08540	(609) 452-1491	http://www.gmtma.org
Hudson TMA	Hudson County	150 Warren Street Jersey City, NJ 07302	(201) 432-2200	http://www.hudsontma.org
Hunterdon Area Rural Transit (HART)	Hunterdon County	71 Main Street Flemington, NJ 08822	(908) 788-5553	http://www.hart-tma.com
Keep Middlesex Moving	Middlesex, Monmouth and Ocean counties	100 Bayard Street, 2nd Floor, New Brunswick, NJ 08901	(732) 745-4490	http://www.kmm.org
Meadowlink	Bergen and parts of Hudson, Passaic and Essex counties	201 Route 17 North Rutherford, NJ 07070	(201)939-4242	http://www.meadowlink.org
McRides	Morris, Sussex, Warren, Suburban Passaic and Essex counties	2 Ridgedale Ave. - Suite 200 - Cedar Knolls - NJ	(973) 267-7600	http://www.mcrides.org
RideWise of Raritan Valley	Somerset County	166 W. Main St. Somerville, NJ 08876	(908) 704-1011	http://www.ridewise.org
Transit Plus	Essex and Union counties	One Penn Plaza East, Newark, NJ 07015	(973) 491-PLUS	

Improvement Plans, Programs & Studies

The municipal capital improvement plan is prepared on an annual basis. This plan is for _____ (*one/two/three/four/five/six*) years and is reviewed by the Planning Board and approved by the municipal council. The transportation portion of the capital improvement plan is prepared by the _____ (*municipal engineer/town council/town planner/other*). There are ____ (#) projects in the current capital improvement plan that refer to transportation demand management.

The County has a ____ (#) year capital improvement plan. The County plan is prepared annually and lists projects for the next ____ (#) years. The County plan is prepared by the Department of _____ and is approved by the County Freeholders at a public meeting. The County _____ (*solicits or does not solicit*) input from municipal

representatives. The County plan has ____ (#) projects in their program that refer to transportation demand management that could impact our community.

Since our community is in _____ County the _____ is our area's MPO. The current TIP has _____ (#) projects that impact our community that relate to transportation demand management.

Plan Recommendations

Since any reduction in single occupancy vehicle (SOV) rates helps our community to better utilize our existing infrastructure we encourage all our residents and local employers to consider the many different techniques to reduce SOV usage, especially during rush hours. After reviewing the existing programs that are being used throughout our community the following recommendations became evident.

1. Town employees should be encouraged to use alternate means of travel for their work commutes.
2. Town administration should consider offering alternative work schedules to town employees in order to reduce rush hour traffic.
3. All new businesses should be encouraged to submit a trip reduction plan upon submitting an application to the Planning Board.
4. The town government should sponsor walk and bike to work days as an annual event
5. Flexible parking rates should be considered for our publicly owned lots.
6. Private businesses should be encouraged to adopt parking pricing policies.
7. Businesses should be given a reduction in total parking stalls required based on providing an implementable trip reduction plan.
8. Businesses should provide bicycle lockers and racks.

The Model Municipal Circulation Element

1. *What is a Master Plan?*

The Master Plan, or Comprehensive Plan, is a community's guide to the future. The Plan reflects what residents want their community to become. It also serves as a guide for those who make land-use decisions – decisions that will affect not only us but also generations to come. In preparing a Master Plan, the planner brings together citizens, business leaders and local officials. The idea is to involve as many people as possible, so that those who know their community best have the opportunity to shape its future. With the Master Plan, the planning board can require proper land use, meet local housing needs and protect important natural resources.

2. *Why do we need to have an updated Master Plan?*

Master plans must be re-examined every six- (6) years. The law required completion of the first re-examination August 1, 1988 and subsequently, every six years from that date. Failure to do so is looked upon as a presumption that local development regulations are no longer reasonable.

3. *We're completely developed. Do we really need to plan?*

If you want to preserve and maintain the quality of life in your town, you have to plan for the future. What happens if a developer wants to tear down a store in your downtown to make room for a large hotel? Or traffic increases in your town because of a new shopping mall in the township next door? Or you find that more and more people in town are elderly and require special housing? Or funding becomes available for redevelopment? It is much easier to deal with these situations if you have previously planned for them.

4. *What is the State Development and Redevelopment Plan?*

The State Development and Redevelopment Plan (SDRP) is the basis of a statewide process to ensure that members of the public and all levels of government participate in planning for New Jersey's future. It is required by the State Planning Act, which was signed into law on January 2, 1986. It is intended to help New Jersey conserve its natural resources, revitalize its urban centers, and provide needed housing and public services.

5. *How does the State Plan affect my Master Plan?*

The Municipal Land Use Law (MLUL) requires that a municipal master plan contain a statement of consistency or inconsistency with the State Plan. The basic goal of the state plan is to try to get the local master plan to be consistent with the objectives of the State Plan and with other master plans.

6. *What other plans affect my town?*

Other plans that may affect your town are those of neighboring towns, the county planning board, regional sewer and water authorities and the New Jersey Department of Transportation (NJDOT). As a matter of fact, the MLUL requires that a town's Master Plan include a statement outlining its relationship to these other plans, as well as to the district solid waste management plan. Some others to be aware of are plans prepared by Metropolitan Planning Organizations (MPOs), Transportation Management Associations (TMAs), and the Management Associations for the Pinelands, Meadowlands or Coastal Area.

7. *What is the Municipal Land Use Law (MLUL)?*

The Municipal Land Use Law was adopted by the New Jersey Legislature in 1975. It is this legislation that allows municipalities to plan their land use. Town planning boards receive their powers through the MLUL, such as the power to zone and the power to hear applications for subdivisions and site plans. The MLUL requires that every community that wishes to regulate land use have a master plan which "guides the use of lands within the municipality in a manner that protects public health and safety and promotes the general welfare".

8. *Why do we have to follow the MLUL? Does anyone enforce it?*

Most towns regulate land use within their boundaries through the use of zoning and, according to the MLUL, a Zoning Ordinance cannot be adopted until the Planning Board has adopted the Land Use Plan and Housing Elements of a Comprehensive Master Plan. If a town fails to follow the provisions of the MLUL, they may find themselves the defendants in a lawsuit filed by a developer or even a private citizen.

9. *What elements are required in a Master Plan?*

According to the MLUL, the Plan must contain:

- A statement of objectives, principles, assumptions, policies and standards upon which proposals for the development of the municipality are based.

- A land use element, which describes existing and proposed land use, as well as population and development intensity and natural conditions including topography, soil conditions, water supply, drainage and floodplain areas. (If funding for a stormwater plan has been made available, then a stormwater plan is also required).

Optional master plan elements include circulation, housing, utility service, community facilities, recreation, conservation, economic, historic, and recycling.

10. If a Circulation Element is not required, why should we prepare one?

Although the circulation plan is an optional element of the Master Plan, how people and goods move within and between communities is critically important to the land use element (which is required). Population growth is a fact of life and moving the people of New Jersey will become more and more difficult as time goes by, unless plans are made to provide for and protect the public's interest and investment in the public right-of-way and transportation system.

11. What should be included in a Circulation Element?

The first step is an inventory of every system that currently exists, including roads, bridges, bus routes, train stations, bike paths, sidewalks, parking lots, airports, and docks. Then a list should be made of any improvement plans, programs & studies that have been done on transportation issues affecting your town. Recommendations for improvements should be made, along with a plan for implementing them. Regulations that affect your transportation choices should be outlined. Examples of these include the State Highway Access Management Code, the Federal Clean Air Act, and any local traffic management ordinances.

12. Who should be involved in the writing and review of a Circulation Element?

Citizen involvement is key to establishing effective goals for the future. It provides valuable insight into the needs of residents and develops community support for future implementation. A series of roundtable discussions or interactive design workshops can be an effective way of involving community members. Meetings held in the evenings and/or weekends to allow public participation can help improve attendance. Special meetings with school children and seniors may help planners gain a better understanding of the particular needs of various peoples in their community.

13.What is a Bike/Ped Plan?

Simply put a bike and ped plan is a plan that inventories existing facilities and demonstrates where it would like them to be improved and where it would like new facilities constructed. Every Circulation element should look at all modes of transportation in its plan, not just the motor vehicle.

14.Why do I need a Sidewalk Inventory?

If you don't know what you have, you don't know what you're missing. Every one knows where their roads are located, why not their sidewalks? Road maps are easily available and when reconstruction takes place, officials can easily locate the area being worked on. Few towns know where their sidewalks are, or what condition they are in. If they did, they could plan for improvements to the pedestrian network. Whenever roads are fixed, sidewalks could be repaired at the same time. And when new subdivisions are built, sidewalks could be installed to connect to the downtown or the local park.

15.Will people really ride bikes?

Build it and they will come. Would people drive cars if there were no roads, or if the roads were in such poor shape that it was dangerous to do so? Think of a large empty field between a shopping mall and a housing development. Will people drive across it? Pave a road across it and they will. Install a bicycle path instead and see what happens. Bicyclists just need a safe place to ride and places to ride to. You can plan for both.

16.What is the State Highway Access Management Code?

The New Jersey State Highway Access Management Code was adopted in 1989 to regulate access to state highways. Its main purpose is to improve safety and reduce congestion by controlling the number and location of driveways on highly traveled roads. Each section of state highway is classified from Access Level (AL) 1 (one) (fully controlled, as on interstate highways) to AL 6 (six) (driveway access, for local roads).

17.How does it affect roadways in my town?

The Access Management Code does not only affect state highways; it regulates the number and spacing of any streets or driveways that open onto them, depending on the land use and traffic volumes involved. Just as importantly, the Access Management Code establishes Desirable Typical Sections. A DTS is the NJDOT's long range plan for state highway segments, including the desirable number of lanes

and type of median (if any). If the Department changes the DTS of a State highway segment, the access classification and access level may also change. This can affect anyone with a lot fronting the highway, private residences and businesses alike.

18. What does "transit-friendly" mean?

Making your community "transit-friendly means making land use decisions that encourage residents to use transit as an alternative to the automobile for at least one or more of their trips between home, work, shopping, school or services. It also means organizing land uses in a way that encourages workers, visitors and others coming to your community to use transit.

19. Why should I plan for transit?

The choice to travel by transit rather than by private automobile brings many benefits. It encourages pedestrian activity at and around train stations and bus stops, contributing to the vitality and activity of the community it serves. Planning land use in relation to transit can be a powerful force in managing and directing growth and change. For example all new commercial areas should be designed as if bus service already exists so in the future if bus service becomes available it could easily serve the site.

20. Where do we go for assistance with our Master Plan and Circulation Element?

As a start it is recommended to utilize local planning professionals that are in your County offices as well as the Office of State planning. These professionals could give you some examples of plans that they have or plans that they feel "cover" all the issues in a concise manner. The office of the New Jersey Planning Officials also has resources and professionals on call that could be of assistance.

21. Where do we get the money to pay for what we recommend in the Plan?

There are a variety of tools and techniques that can be used to finance projects.

- Impact Fees
  This method is used as a part of the development approval process and involves the imposition of impact fees on private developers to fund public improvements to the transportation infrastructure. This requires a local ordinance.
- Negotiated Agreements
- Transportation Improvement Districts
- Transportation Development Districts
- Capital Improvement Programs
- Grant and Aid Funding

The following section, included for your reference, is a "user guide" – A compilation of approaches, suggestions, and resources to help guide the planning board member in effectively acquiring and compiling data to be included in the Model Municipal Circulation Plan Element. First, it provides a set of approaches for ***Getting the Information You Need,*** and discusses the potential advantages and disadvantages of each. Then, in the sections that follow, it offers up suggestions for ***Potential Data Sources***, in a section-by-section approach that parallels the structure of the Model (from one mode of transportation to another) to help the planning board member *fill in the blanks* as he or she goes along.

Getting the Information You Need

In many cases, you will be able to refer to existing data sources, many of which are available at your local or county library, or filed at your municipal or county office. Documentary sources that are rich in usable data include U.S. Census data, Department of Labor data, and local and county Master Plans. In addition, you may wish to tap into various individuals and organizations to obtain useful data, including local officials, police, and various interest and advocacy groups. Likely data sources, specific to various Circulation Element components, are listed by mode of transportation in the following sections.

Data sources are plentiful in many cases, and it is often very time consuming just locating and collecting the appropriate data. Data collection can become cost prohibitive when it involves data that is not collected and compiled on a regular basis, and may involve field inventory, survey, and additional research. A number of approaches for gathering such data are listed below, from the least expensive to costlier approaches:

- ***Volunteers*** - Soliciting the aid of volunteers is the least costly approach, as this involves no monetary compensation. Individuals who volunteer contribute their time and effort in exchange for compensation in the form of "doing something" for their community or furthering their own special interest. Contacting interest groups is one means of tapping into volunteer resources. For instance, a bicycle advocacy group would likely be willing to participate in an inventory of bicycle facilities or an assessment of the bicycle safety for a given area. In this case, volunteers' efforts are aimed not only at serving the community-at-large, but also in advancing their own cause to foster a better – and safer –environment for bicycling.

- ***Interns*** - Interns are another good low-cost resource. Intern labor can be solicited by contacting a nearby college or university (especially one that has a program in planning or public policy). Postings in local newspapers and career resource offices may be effective in attracting interns, as well. Such students are likely anxious to gain experience and exposure to the planning arena, and are often compensated in

the form of credit hours by their college or university. Interns require little to no pay to perform their duties. However, they may require a longer-than-desirable learning curve and/or technical training, and may be more prone to "honest mistakes" given a lack of familiarity with the profession and/or the community. Another good resource for posting for intern help can be on the New Jersey Chapter of the American Planning Association's web page which is at http://www.njapa.org. This service is provided for no charge when posting a planning position.

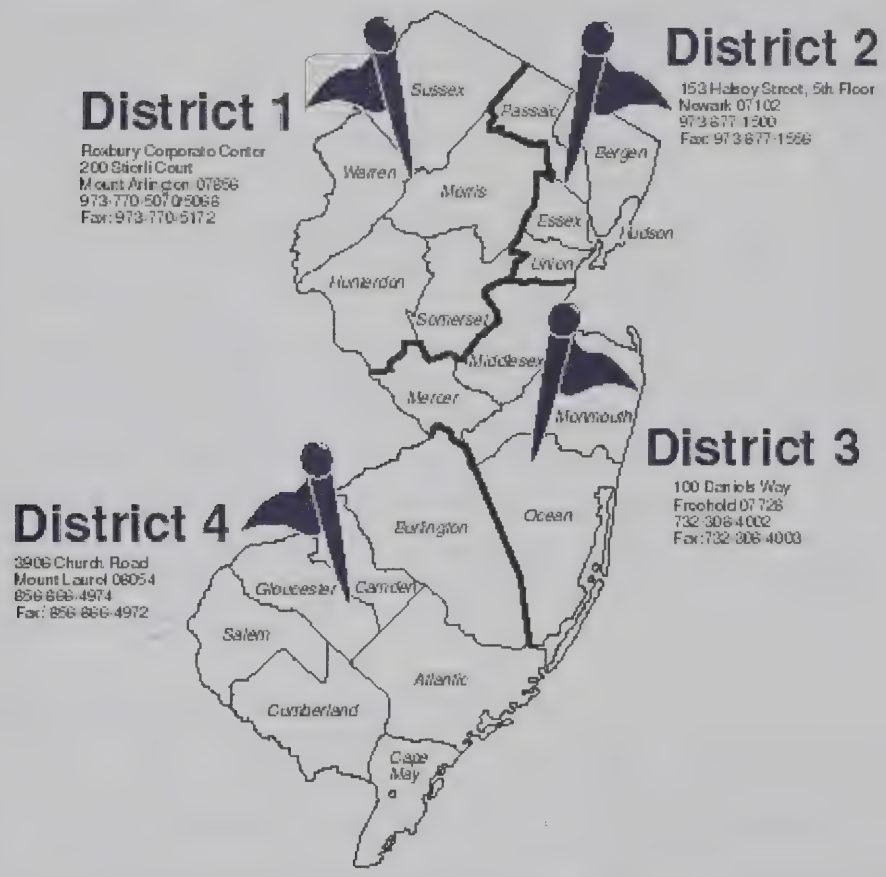
- *Staff* - Where it is in place, a professional planning staff will likely possess the expertise to quickly locate available data sources and determine an effective means to acquire additional data, as necessary. Utilizing existing staff resources – should time, schedules, and departmental resources permit – may be advantageous for a number of reasons. Staff possess a working knowledge of the community-at-hand – its functions, activities, and the overall lay of the land. Staff may also provide unique insight into such intricacies as community image and vision. Because of these factors, as well as their greater role as community members, staff also often have a stake in the successful implementation of a Master Plan and its associated initiatives. In many cases, however, planning resources are scarce, and staff may be stretched to their limit as far as workload, or even nonexistent.

- *Consultant services.* The more costly of the approaches is to hire a consultant to gather and analyze data, present findings, and make recommendations. Consultants are sometimes helpful to bring in because of their expertise in planning and because they can sometimes bring in a new perspective to an existing problem. Consultants are also helpful when the issues are very political which makes it hard for existing staff to recommend one way or another. A good source of consultants is the newsletter that is produced by the New Jersey Planning Officials, http://njpo.org/. Another good source is the NJDOT web site that lists prequalified consultants. That link is www.state.nj.us/transportation/framed/finance/professi.htm

Potential Data Sources

Roads and Highways

- **Jurisdiction of Roads**
  Jurisdiction information on major routes can be determined by contacting NJDOT or the MPO serving your area (NJTPA, DVRPC, or SJTPO). For example, jurisdiction information for state highways, select county routes, and other facilities included in the National Highway System is available in the form of the NJDOT's Straight Line Diagrams (available online at www.state.nj.us/transportation/framed/stright.htm). County jurisdiction can be determined by contacting the appropriate County Department (information available through the Public Works, Engineering, Planning, or Roads



Department, depending on the county in question). Mileage can be calculated on computer using a Geographic Information System, where available, or by measuring on a map of appropriate scale.

- **Functional Classifications of Roads**
  Functional Classification information on major routes can be determined by contacting NJDOT or the MPO serving your area (NJTPA, DVRPC, or SJTPO). For example, functional classification information for state highways, select county routes, and other facilities included in the National Highway System is available in the form of the NJDOT's Straight Line Diagrams (available online at www.state.nj.us/transportation/framed/stright.htm). In addition, the NJDOT periodically prepares and updates general highway maps illustrating the functional classification of all roads, statewide (these maps should be checked against more local sources of information and, where appropriate, field checks). Details on routes falling under the jurisdiction of the counties can be determined by contacting the appropriate County Department (information available through the Public Works, Engineering,

Planning, or Roads Department, depending on the county in question). Mileage can be calculated on computer using a Geographic Information System, where available, or by measuring on a map of appropriate scale.

- **Existing Right-of-Way Widths**
  Right-of-way information on major routes can be determined by contacting NJDOT or the MPO serving your area (NJTPA, DVRPC, or SJTPO). For example, certain right-of-way elements for state highways, select county routes, and other facilities included in the National Highway System is available in the form of the NJDOT's Straight Line Diagrams (available online at www.state.nj.us/transportation/framed/stright.htm); this data should be checked against more local sources of information. Details on routes falling under the jurisdiction of the counties – and relevant county standards -- can be determined by contacting the appropriate County Department (information available through the Public Works, Engineering, Planning, or Roads Department, depending on the county in question). Municipal standards for rights-of-way on local roads can be determined through contact with various municipal bodies (e.g., Public Works, Planning Board), and through reference to prior iterations of the Comprehensive Master Plan and Official Map. Field surveys can also provide for on-site observations and actual physical measurement. In addition, widths can be estimated through reference to tax maps and other local map sources.

- **Desired Typical Section and Pavement Condition**
  Typical section and pavement information on major routes can be determined by contacting NJDOT or the MPO serving your area (NJTPA, DVRPC, or SJTPO). For example, speed limit, number of lanes, divided vs. undivided segments, median and shoulder characteristics, and other information for state highways, select county routes, and other facilities included in the National Highway System is available in the form of the NJDOT's Straight Line Diagrams (available online at www.state.nj.us/transportation/framed/stright.htm); this data should be checked against more local sources of information. Details on routes falling under the jurisdiction of the counties can be determined by contacting the appropriate County Department (information available through the Public Works, Engineering, Planning, or Roads Department, depending on the county in question). The municipal vision for typical sections on local roads can be determined through contact with various municipal bodies (e.g., Public Works, Planning Board), and through reference to prior iterations of the Comprehensive Master Plan and Official Map. Assessments of pavement condition, as well as history and schedules for repaving efforts, may also be available through contact with local public works departments.

  In addition, MPOs are a source for additional information on critical routes of a regional nature. For example, the NJTPA's Regional Transportation Plan highlights primary travel movements, major mobility and accessibility issues, and critical

problem areas (relative to congestion, growth, redevelopment, condition, and safety). MPOs are also responsible for overseeing management systems that monitor various transportation areas, under the auspices of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); Pavement Management System (PMS) and Bridge Management System (BMS) data may aid in the assessment of the condition of major roadways and bridges for the circulation element.

- **Congestion/Traffic Volumes**
  Traffic volume information on select routes can be determined by contacting NJDOT (http://search.panzitta.com/gensearch.cfm *http://www.state.nj.us/transportation/count/data/sub/volumes.htm)* or the MPO serving your area (NJTPA, DVRPC, or SJTPO). NJDOT's Straight Line Diagrams include traffic counts at various locations (for a specified year) for some state highways, select county routes, and other facilities included in the National Highway System (available online at www.state.nj.us/transportation/framed/stright.htm). Certain counties and municipalities also perform their own traffic counts, hire traffic experts, or contract out to consultants to obtain traffic volumes. This information, where available, may be obtained through the Public Works, Engineering, Planning, or Roads Department, depending on the county in question. Relevant information may also be obtained through reference to Traffic Impact Analyses and other land development review elements (site plan and subdivision information). Traffic volumes may be available for select locations (reflective of the location of the development in question), and these elements are filed with county and municipal planners.

  MPOs are a source for additional information on critical routes of a regional nature. For example, the NJTPA's Regional Transportation Plan highlights primary travel movements, major mobility and accessibility issues, and critical problem areas (relative to congestion, growth, redevelopment, condition, and safety). MPOs are also responsible for overseeing management systems that monitor various transportation areas, under the auspices of the Transportation Equity Act for the 21st century (TEA 21); Congestion Management System (CMS) data, where available, may aid in the assessment of congestion for the circulation element. In addition, a community may hire a traffic expert to take traffic counts, calculate volume/capacity ratios, and determine levels-of-service on the transportation facilities serving the town.

- **Crashes**
  Crash data is available from the police at the local, county, and state levels. The NJDOT also tracks and compiles a list of the state's worst safety intersections (along State Highways, under its jurisdiction). Traffic Safety Organizations also collect information on safety issues that may impact your community. NJDOT's web site for crashes is http://www.state.nj.us/transportation/count/data/accident.htm

In addition, MPOs are a source for additional information on critical routes of a regional nature. For example, the NJTPA's Regional Transportation Plan highlights primary travel movements, major mobility and accessibility issues, and critical problem areas (relative to congestion, growth, redevelopment, condition, and safety). MPOs are also responsible for overseeing management systems that monitor various transportation areas, under the auspices of the Transportation Equity Act for the 21st century (TEA 21); Safety Management System (SMS) data, where available, may aid in the assessment of safety conditions for the circulation element.

- **Improvement Plans, Programs and Studies**
  Improvement plans, programs, and studies of a regional scale and interest are compiled, monitored, and funded through the MPO serving your area (NJTPA, DVRPC, or SJTPO). Information regarding state highways can also be obtained through contact with the NJDOT. County-level improvement programs, master plan elements, and transportation studies may be made available through the County Public Works, Engineering, Planning, or Roads Department, depending on the county in question. Information on municipal projects, priorities for local improvements, and anticipated development patterns may be obtained through contact with various municipal bodies (e.g., Public Works, Planning Board), and through reference to prior iterations of the Comprehensive Master Plan and Official Map. In addition, reference should be made to the New Jersey State Development and Redevelopment Plan, such that infrastructure investment and associated development patterns comply with State Plan goals and objectives.

- **Traffic Circulation/Proposed Roadway Design Specifications**
  Here, compare current roadway cross-sections with desired typical sections and anticipated roadway design specifications. Identify roads that do not meet circulation goals and objectives or proposed design specifications. Utilize all of the information collected above as resources to assess transportation circulation and proposed roadway design specifications. Again, circulation concerns should be addressed consistently with local planning and development efforts (Official Map, Zoning Ordinance, Land Development Ordinance and review process, past Master Plans, etc.). It is also critical to gauge consistency with other jurisdictions, including neighboring municipalities whose roads and highways link up with yours, as well as County and State agencies whose facilities pass near or through your community. For reference's sake, you may wish to assess circulation plans in municipalities that are similar in terms of demographic, economic, and land use patterns.

Walkways

Strategies to gauge pedestrian activity along various routes include taking pedestrian counts, identifying locations of activity centers that attract pedestrian traffic, identifying areas of unmet demand (as indicated by pedestrian traffic in road, worn paths along discontinuous sections of sidewalk, etc.), and review of walk-to-school routes. These can be performed through field surveys and reference to maps.

A field survey may also be employed in order to determine the adequacy of pedestrian facilities in-place, through inventory of sidewalk location, condition, type and speed of traffic on parallel roads, continuity and connectivity of sidewalks, crosswalk location, types of crosswalks, signage and signalization, curb ramp provision, and other pedestrian facility characteristics. Field surveys can also identify the location and provision of various pedestrian-oriented amenities (benches, signage, lighting, etc.) and generalized quality of the pedestrian experience. A comparison of pedestrian activity and need with the presence and quality of pedestrian facilities in-place can help to determine future priorities for pedestrian projects.

Information on sidewalks and pedestrian facilities that run parallel to or cross municipal roads and highways can also be obtained through reference to information collected for the "ROADWAYS" section of the Circulation Element (jurisdiction, functional classification, rights-of-way, typical section, pavement condition, congestion and safety issues, etc.). This information would also prove helpful in determining where constraints may exist in providing pedestrian facilities in current rights-of-way, and in the identification of feasible alternate routes. The feasibility of traffic calming elements may also be determined through reference to this information. NJDOT's Pedestrian Compatible Planning and Design Guidelines can provide detailed information on this subject. This guide is available at http://www.state.nj.us/transportation/publicat/pedest_guide.htm

Local police are a key resource for obtaining information on pedestrian safety, including points-of-conflict, incidents, and crashes. In addition, your local or regional pedestrian advocacy group can provide a wealth of information on safety concerns, and all facets of the pedestrian experience.

(Contact your local AAA office for assistance. An example from Oregon is "Portland Kids on the Move". See http://www.trans.ci.portland.or.us/PDOT_Services/traffic_safety_around_schools.htm for information. Another resource is the National Walk Our Children to School Day, sponsored by the Partnership for a Walkable America. The idea is for children, parents, and community leaders to walk to school for a purpose – to promote safety, health, physical activity, and concern for the environment. The event is held every October in locations around the world. Some communities participate to teach children safe walking skills. Others are able to find out how walkable their community is and identify safe walking routes to school. For information, go to http://www.walktoschool-usa.org/usa_walk/resources/resources.htm.)

Furthermore, information on demographic and economic indicators utilized in the analysis for areas of pedestrian facility demand – such as population distribution and density, households with no vehicles, location of employment centers, etc. – may be obtained from the U. S. Census, and through contact with State and regional agencies, including MPOs, County Departments of Planning, and the New Jersey Department of Labor. In addition, a number of private data collection and management firms assemble this information and bundle it for sale to clients specializing in market analysis and similar uses.

It may also be helpful to tap into the expertise of a municipal panner, Division of Land Development Review, Local and County Planning Boards, and other relevant local agencies. These officials can also provide insight into consistency of sidewalk design and provision with site plan and subdivision review and other local standards.

Bikeways

Inventories of bicycle facilities and amenities (such as racks, lockers, etc.), activity centers that attract bicycle traffic, and continuity and connectivity of marked bicycle lanes, routes, and paths (through signage and striping) may be acquired through field visits and surveys. Compatibility of roads and highways relative to bicycle needs – and associated need for retrofitting and new facility construction -- can also be assessed through field visits, and through reference to information collected for the "ROADWAYS" section of the Circulation Element (jurisdiction, functional classification, rights-of-way, typical section, pavement condition, congestion and safety issues, etc.). NJDOT's Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines can provide detailed information on this subject. This guide can be obtained at http://www.state.nj.us/transportation/publicat/bike_guidelines.htm

The following sources may be contacted for further information on bicycle planning:

- Major employers – to determine whether they provide amenities for commuting cyclists.
- Major activity centers – to determine whether they provide amenities to promote cyclist access to their facilities.
- Transit carriers – to see what provisions are made for bicycles both at transit stops, and on buses, trains, and other facilities.
- Local police – to obtain information on bicycle safety, including points-of-conflict, incidents, and accidents.
- Educational institutions – to see what bicycle safety training programs are in place

In addition, your local or regional bicycle advocacy group can provide a wealth of information on all facets of bicycle use, planning, and need. Furthermore, information on demographic and economic indicators utilized in the analysis for areas of bicycle

facility demand – such as population distribution and density, households with no vehicles, location of employment centers, etc. – may be obtained from the U. S. Census, and through contact with State and regional agencies, including MPOs, County Departments of Planning, and the New Jersey Department of Labor. In addition, a number of private data collection and management firms assemble this information and bundle it for sale to clients specializing in market analysis and similar uses.

Marinas

Marina facilities can be inventoried through reference to a local Telephone Directory or contact with a Chamber of Commerce. Details on services (current usage, capacity, services provided, hours of operation, etc.) can be obtained by contacting individual operators, whether public (municipal, county) or private. In addition, the New Jersey Department of Environmental Protection (NJDEP) may be contacted to provide additional information on its Clean Vessel Program and the location and capacity of pumpout stations.

Transit

- **Bus & Rail Transit**

Information on bus and passenger rail transit can be acquired from NJ Transit and various other regional carriers. In order to fully assess transit levels of service, the following data collection efforts may be employed:

- Identify and count the number of routes serving your town
- Assess service characteristics in terms of direction of service (e.g., New York-bound vs. community-bound), headways (gaps in time between buses), rush-hour vs. off-peak service, weekend and holiday service, etc. (refer to bus and train schedules for information).
- Assess locations served -- where can you hop onto a bus or train, and where can you go? (check bus maps and schedules)
- Compare capacity and ridership – are buses over capacity at various hours? Do they run "through" town rather than serve it because they are full? (inquire with carriers)
- Provide information on fares (inquire with carriers)
- Identify transit-supporting densities, using population and employment data to illustrate the following premise: the more densely populated the community, and the greater the concentration of employees, the greater the level of transit that the community supports. The more densely developed a community is relative to residential and employment development, the greater the "need" and justification for increased transit service to various locations. On the other hand, transit service is often not an effective approach to serving the transportation needs of more sparsely developed communities.

- Identify location/proximity of activity centers
- Inventory rail stations and bus stops, noting signage, shelters, and other on-site amenities and provisions.
- Inventory location, capacity, and prices at Park & Rides and other transit-oriented parking facilities.
- Identify need for new transit services (bus and rail), depending on populations and activity centers to be served.
- Identify need for new transit access points (rail stations, bus transfers, shelters, bus stops).
- Identify need for new parking facilities.

Information on bus and passenger rail transit can be acquired from NJ Transit and various other regional carriers – including route descriptions, locations served, transit maps and schedules, ridership numbers, capacity of vehicles, stop and station locations, parking facilities, and prices for service. Furthermore, information on demographic and economic indicators utilized in the analysis of transit-supporting densities may be obtained from the U. S. Census, and through contact with State and regional agencies, including MPOs, County Departments of Planning, and the New Jersey Department of Labor. In addition, a number of private data collection and management firms assemble this information and bundle it for sale to clients specializing in market analysis and similar uses.

- **Other Transit Services**
  Information on ferry services can be obtained through operators, as well as local participants and sponsors. Paratransit information can be acquired through the County Division of Transportation, Municipal service operators, and by contacting senior centers, centers for disabled persons, and other primary users of the service. Furthermore, populations in need of paratransit can be assessed by obtaining demographic information from the U. S. Census, and through contact with various agencies, including MPOs, County Departments of Planning, senior citizen organizations, and various State agencies.

  Taxi and shuttle services can be inventoried through reference to a local Telephone Directory, as well as by tracking licensing through contact with your local Police Department. Details on services (hours of operation, coverage areas, pricing, etc.) can be obtained by contacting individual operators.

Aviation

Information on passenger and freight movements, facility usage by various airlines and carriers, aircraft storage and hangar capacity, number and length of runways, terminal characteristics, and other on-site facilities and services can be provided through contact with the administrative staff of airports, both public and private. In addition, this staff

may be able to provide maps and other information regarding internal circulation, connecting transportation, processing of freight and luggage, and parking (price, capacity, etc.).

Information on regionally significant airports can be obtained through contact with the Port Authority of New York and New Jersey (Newark International Airport, John F. Kennedy International Airport, LaGuardia Airport, Teterboro Airport), or the South Jersey Transportation Authority (Atlantic City International Airport).

Individual airlines and carriers can be contacted for takeoffs and landings, number of passengers and packages processed, number of destinations served, scheduling/ frequency of various services, hub location and operation, and other operations characteristics.

Goods Movement

The MPO serving your area (NJTPA, DVRPC, or SJTPO) may be able to provide a regional overview and/or inventory of freight-generating facilities, including railyards, truck terminals, airports, seaports, and warehousing and manufacturing centers. Once these are identified, information on goods movement and related facility usage may be provided through contact with the facility operators, freight companies utilizing the facilities, and (where relevant) your regional port authority (Port Authority of New York and New Jersey or the Delaware River Port Authority). This information may include amount of freight, origins and destination points, on- and off-loading and intermodal issues, etc.

Review of current land use, zoning, and related policies with the assistance of local or regional planning staff can help to determine whether freight generators and attractors are located appropriately – with particular attention to impacts on incompatible uses (schools, parks, residential development, etc.) and transportation facilities. Ideally, freight generators will be located adjacent to interstate highways, major interchanges, freight railroads, and port facilities. Maps, field surveys, and related traffic studies can be used to determine reasonable truck routes (routing and signage), roadway and bridge deficiencies (clearance, weight, and roadway width), weigh station and inspection facility location, and other information relevant to goods movement. In addition, local, county, and state police may be contacted for information on violations (including inspection, weight limit, and moving violations for trucks, idling violations for freight rail, etc.), and safety concerns (freight-related accidents, safety at rail crossings, incident tracking for spills, etc.).

	Yes	Some What	No	N/A	Comments
ROADWAYS					
1. Are the functional classes of roads listed?	❑	❑	❑	❑	
2. Are the definitions of the listed functional classifications provided?	❑	❑	❑	❑	
3. Are the roads listed by classification?	❑	❑	❑	❑	
4. Are the average traffic volumes for each of the listed roads provided?	❑	❑	❑	❑	
5. Are the posted speed limits of the listed roads provided?	❑	❑	❑	❑	
6. Are areas of road congestion listed in the plan?	❑	❑	❑	❑	
7. Are the locations of congestion clearly described?	❑	❑	❑	❑	
8. Is the level of service to these areas of congestion discussed?	❑	❑	❑	❑	
9. Is the crash history of the listed roads discussed?	❑	❑	❑	❑	
10. Are the accident locations given in the plan?	❑	❑	❑	❑	
11. Are the types of accidents given?	❑	❑	❑	❑	
12. Is the injury count per accident given?	❑	❑	❑	❑	
13. Are on-street parking facilities listed?	❑	❑	❑	❑	
14. Are off-street parking facilities listed?	❑	❑	❑	❑	
15. Are the locations of the parking facilities clearly defined?	❑	❑	❑	❑	
16. Is the capacity of each parking facility provided?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
17. Is the pricing of each parking facility listed?	❑	❑	❑	❑	
18. Is the average usage of the parking facility discussed?	❑	❑	❑	❑	
19. Is there a municipal capital improvement plan or other plans that are mentioned in the plan?	❑	❑	❑	❑	
20. Is there a compatibility statement regarding this circulation plan to those other plans?	❑	❑	❑	❑	
21. Does the plan discuss/recommend any new construction of roadways?	❑	❑	❑	❑	
22. Does the plan discuss/recommend any new construction of parking facilities?	❑	❑	❑	❑	
23. Does the plan discuss/recommend any reconstruction of roadways?	❑	❑	❑	❑	
24. Does the plan discuss/recommend any reconstruction of parking facilities?	❑	❑	❑	❑	
25. Does the plan discuss/recommend any maintenance of roadways?	❑	❑	❑	❑	
26. Does the plan discuss/recommend any maintenance of parking facilities?	❑	❑	❑	❑	
27. Does the plan discuss/recommend any intermodal enhancements?	❑	❑	❑	❑	
28. Does the plan discuss/recommend any reclassification of roadways?	❑	❑	❑	❑	
29. Does the plan discuss/suggest any jurisdictional changes?	❑	❑	❑	❑	
30. Does the plan discuss/recommend any traffic calming priorities?	❑	❑	❑	❑	
31. Does the plan discuss the implementation of a transportation management plan?	❑	❑	❑	❑	
32. Does the plan discuss the implementation of transportation improvement districts (TID)?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
33. Does the plan illustrate the location of the TID?	❑	❑	❑	❑	
34. Does the plan discuss the implementation of transportation development districts (TDD)?	❑	❑	❑	❑	
35. Does the plan illustrate the location of the TDD?	❑	❑	❑	❑	
36. Does the plan discuss the implementation of impact fees?	❑	❑	❑	❑	
37. Does the plan discuss the implementation of negotiated improvements?	❑	❑	❑	❑	
State Highway Access Management Code					
38. Is a description of the State Highway Code regarding access management included in the plan?	❑	❑	❑	❑	
39. Does the plan recommend a municipal access management code?	❑	❑	❑	❑	
40. Does the plan state that there is an existing municipal access management code?	❑	❑	❑	❑	
41. Does the plan clearly describe how the access management code works?	❑	❑	❑	❑	
Mass Transit					
42. Has the US Census information been utilized when studying mass transportation services?	❑	❑	❑	❑	
43. Have the locations of bus routes been illustrated or discussed?	❑	❑	❑	❑	
44. Have the destinations of the bus routes been illustrated or discussed?	❑	❑	❑	❑	
45. Is the current ridership for each bus route been given?	❑	❑	❑	❑	
46. Is the historical bus ridership been documented in the plan?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
47. Is the average bus fare documented in the plan?	❑	❑	❑	❑	
48. Are park-and-rides lots for bus service been discussed in the plan?	❑	❑	❑	❑	
49. Are the locations of the park-and-ride lots for bus service been illustrated or mentioned in the plan?	❑	❑	❑	❑	
50. Is the capacity of the park-and-ride lots for bus service been mentioned in the plan?	❑	❑	❑	❑	
51. Is average annual usage of the park-and-ride facilities for bus service been mentioned?	❑	❑	❑	❑	
52. Is the pricing structure for use of the park-and-ride facilities for bus service been mentioned?	❑	❑	❑	❑	
53. Is the cost of maintaining the park-and-ride facilities for bus service been mentioned?	❑	❑	❑	❑	
54. Does the plan document the location of bus shelters?	❑	❑	❑	❑	
55. Is informational signage for bus service been discussed in the plan?	❑	❑	❑	❑	
56. Is the cost to maintain bus facilities discussed in the plan?	❑	❑	❑	❑	
57. Are pedestrian facilities discussed for bus riders?	❑	❑	❑	❑	
58. Is the compatibility between bus riders and bicyclists discussed?	❑	❑	❑	❑	
59. Are bicycle facilities discussed for bus riders?	❑	❑	❑	❑	
60. Is there a description of the bus service in the plan?	❑	❑	❑	❑	
61. Are parking facilities discussed for bus riders?	❑	❑	❑	❑	
62. Are parking fees for the lots serving bus riders been discussed in this plan?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
63. Are the bus connection fares discussed in the plan?	❑	❑	❑	❑	
64. Are the rail connection fares discussed in the plan?	❑	❑	❑	❑	
65. Is the surrounding land use around bus stops been mentioned in the plan?	❑	❑	❑	❑	
66. Have the locations of rail corridors been illustrated or discussed?	❑	❑	❑	❑	
67. Have the origins of the rail corridors been illustrated or discussed?	❑	❑	❑	❑	
68. Have the destinations of the rail corridors been illustrated or discussed?	❑	❑	❑	❑	
69. Are the hours of service for rail been discussed in the plan?	❑	❑	❑	❑	
70. Is the on-time performance for rail service been discussed in the plan?	❑	❑	❑	❑	
71. Is the time between trains, or headway, discussed in the plan?	❑	❑	❑	❑	
72. Is the current ridership from each train station been discussed?	❑	❑	❑	❑	
73. Are ridership trends for rail service been discussed in the plan?	❑	❑	❑	❑	
74. Are the origins of passengers for rail service been discussed in the plan?	❑	❑	❑	❑	
75. Is the capacity of the rail station lots discussed?	❑	❑	❑	❑	
76. Is the capacity of the parking lot(s) for the train station given?	❑	❑	❑	❑	
77. Is the average amount of riders for a rail station given?	❑	❑	❑	❑	
78. Are the fares for the train service given?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
79. Is there a description of parking fees for the train station?	❑	❑	❑	❑	
80. Is the annual cost of maintaining the rail station facilities given?	❑	❑	❑	❑	
81. Are passenger shelters for rail passengers been discussed in the plan?	❑	❑	❑	❑	
82. Is there a description of informational signage that is provided in the community?	❑	❑	❑	❑	
83. Are pedestrian facilities for rail riders mentioned in the plan?	❑	❑	❑	❑	
84. Is the compatibility between rail riders and bicyclists discussed?	❑	❑	❑	❑	
85. Are any rail connections discussed in the plan?	❑	❑	❑	❑	
86. Are the rail connection fares discussed in the plan?	❑	❑	❑	❑	
87. Is there a description of the rail service in the plan?	❑	❑	❑	❑	
88. Are bus connections with rail been discussed in the plan?	❑	❑	❑	❑	
89. Are the bus connection fares with rail been discussed in the plan?	❑	❑	❑	❑	
90. Are the surrounding land uses discussed?	❑	❑	❑	❑	
91. Is the capital improvement plan discussed regarding mass transit service?	❑	❑	❑	❑	
92. Is there a compatibility statement regarding this circulation plan to the capital or other plans?	❑	❑	❑	❑	
93. Is the municipal land use plan compared to the circulation plan in regards to mass transit service?	❑	❑	❑	❑	
94. Is informational signage for mass transit riders discussed?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
Non-Traditional Transit Service					
95. Are there non-traditional types of transit mentioned in the plan?	❑	❑	❑	❑	
96. Is the ridership of these non –traditional services mentioned?	❑	❑	❑	❑	
97. Is the frequency of service discussed?	❑	❑	❑	❑	
98. Is the pricing structure for use of the park-and-ride facilities mentioned?	❑	❑	❑	❑	
99. Is the cost of maintaining the park-and-ride facilities mentioned?	❑	❑	❑	❑	
100. Are shelter locations listed in the plan?	❑	❑	❑	❑	
101. Is informational signage for this service discussed in the plan?	❑	❑	❑	❑	
Sidewalks					
102. Is the length of the sidewalk(s) mentioned in the plan?	❑	❑	❑	❑	
103. Has the US Census information been utilized when studying pedestrian circulation?	❑	❑	❑	❑	
104. Does the plan discuss/recommend any new construction?	❑	❑	❑	❑	
105. Does the plan discuss/recommend any reconstruction?	❑	❑	❑	❑	
106. Does the plan discuss/recommend any maintenance?	❑	❑	❑	❑	
107. Does the plan discuss/recommend any pedestrian facilities?	❑	❑	❑	❑	
108. Are pedestrian friendly land uses discussed in the plan?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
109. Are the sidewalks location shown or discussed in the plan?	❑	❑	❑	❑	
110. Are the materials that make up the sidewalk documented in the plan?	❑	❑	❑	❑	
111. Are the locations of all curb ramps shown/illustrated in the plan?	❑	❑	❑	❑	
112. Are the dimensions/widths of the sidewalks given in the plan?	❑	❑	❑	❑	
113. Is the cost of maintaining the sidewalk discussed in the plan?	❑	❑	❑	❑	
114. Are shelter locations for pedestrians listed in the plan?	❑	❑	❑	❑	
115. Is informational signage for pedestrians discussed in the plan?	❑	❑	❑	❑	
116. Is the cost of maintaining the pedestrian facilities associated with the sidewalks discussed in the plan?	❑	❑	❑	❑	
117. Are pedestrian count results listed in the plan?	❑	❑	❑	❑	
118. Are pedestrian generators listed in the plan?	❑	❑	❑	❑	
119. Have any existing policies that could enhance pedestrian safety been listed?	❑	❑	❑	❑	
120. Are any new policies proposed to increase pedestrian safety in the plan?	❑	❑	❑	❑	
121. Are maintenance measures proposed to increase pedestrian safety in the plan?	❑	❑	❑	❑	
Nature/Hiking Trails					
122. Has the US Census information been utilized when discussing nature/hiking trails?	❑	❑	❑	❑	
123. Are the nature/hiking trails location shown or discussed in the plan?	❑	❑	❑	❑	
124. Are the dimensions of the nature/hiking trails given in the plan?	❑	❑	❑	❑	

	Yes	Some What	No	N/A	Comments
125. Is the length of the nature/hiking trails mentioned in the plan?	❑	❑	❑	❑	
126. Is the cost of maintaining the nature/hiking trails discussed in the plan?	❑	❑	❑	❑	
127. Are shelter locations for pedestrians along the trail(s) illustrated in the plan?	❑	❑	❑	❑	
128. Is informational signage for trails discussed in the plan?	❑	❑	❑	❑	
129. Is the cost of maintaining the pedestrian facilities associated with the nature/hiking trails discussed in the plan?	❑	❑	❑	❑	
130. Does the plan list the surrounding land uses abutting the trail(s)?	❑	❑	❑	❑	
Bicycle Circulation					
131. Are the bicycle routes/trails location shown or discussed in the plan?	❑	❑	❑	❑	
132. Are the dimensions of the bicycle routes/trails given in the plan?	❑	❑	❑	❑	
133. Is the length of the bicycle routes/trails mentioned in the plan?	❑	❑	❑	❑	
134. Is the cost of maintaining the bicycle routes/trails discussed in the plan?	❑	❑	❑	❑	
135. Are shelter locations for bicycles listed in the plan?	❑	❑	❑	❑	
136. Is there a discussion of informational or tail blazing signage for bicyclists in the plan?	❑	❑	❑	❑	
137. Is the cost of maintaining the facilities associated with the bicycle routes/trails discussed in the plan?	❑	❑	❑	❑	
138. Are bicycle compatible land uses listed in the plan?	❑	❑	❑	❑	
139. Have present measure that have been taken to assure bicycle safety been listed in the plan?	❑	❑	❑	❑	
140. Have additional measures proposed to promote bicycle safety been discussed in the plan?	❑	❑	❑	❑	
141. Is bicycle and roadway compatibility addressed in the plan?	❑	❑	❑	❑	
142. Are bicycle counts listed in the plan?	❑	❑	❑	❑	
143. Are new bicycle facilities proposed in the plan?	❑	❑	❑	❑	

		Yes	Some What	No	N/A	Comments
144.	Is there a compatibility statement regarding bicycle travel and its relationship to the municipal capital improvement plan?	❑	❑	❑	❑	
145.	Is there a compatibility statement regarding bicycle travel and its relationship to the municipal land use development plans?	❑	❑	❑	❑	
146.	Does the plan discuss/recommend any new construction of bicycle\pedestrian facilities?	❑	❑	❑	❑	
147.	Does the plan discuss/recommend any reconstruction of bicycle lanes?	❑	❑	❑	❑	
148.	Does the plan discuss/recommend any maintenance of bicycle facilities?	❑	❑	❑	❑	
	Transportation Demand Management					
149.	Is there a description of the Clean Air Act in the plan?	❑	❑	❑	❑	
150.	Is there a description of an employee trip reduction program?	❑	❑	❑	❑	
151.	Is the 2000 US Census Data used in the section regarding employee trip reduction?	❑	❑	❑	❑	
152.	Is there a description of the voluntary state program for employee trip reduction?	❑	❑	❑	❑	
153.	Are alternate modes of transportation regarding employee trip generation discussed?	❑	❑	❑	❑	
154.	Are the hours and arrangements surrounding these alternatives discussed?	❑	❑	❑	❑	
155.	Are direct incentives for those that use alternative methods of transportation discussed in the plan?	❑	❑	❑	❑	
156.	Is preferential parking discussed in the plan?	❑	❑	❑	❑	
157.	Are parking cash out programs discussed in the plan?	❑	❑	❑	❑	
158.	Are participating private firms listed in the plan?	❑	❑	❑	❑	
159.	Are participating public agencies listed in the plan?	❑	❑	❑	❑	
160.	Are the impacts of trip reduction programs discussed in the plan?	❑	❑	❑	❑	
161.	Is a definition of a Traffic Management Association (TMA) given in the plan?	❑	❑	❑	❑	

		Yes	Some What	No	N/A	Comments
162.	Is the regional TMA discussed in the plan?	❑	❑	❑	❑	
163.	Are any traffic management ordinances discussed in the plan?	❑	❑	❑	❑	
164.	Are there descriptions of any and all traffic management ordinances that relate to the plan?	❑	❑	❑	❑	
165.	Is it compatible with municipal transportation plans?	❑	❑	❑	❑	
166.	Is it compatible with the municipal land use development plans?	❑	❑	❑	❑	
167.	Does the plan discuss/recommend any new employee trip reduction methods?	❑	❑	❑	❑	
168.	Does the plan discuss/recommend any intermodal enhancements for employee trip generators?	❑	❑	❑	❑	
169.	Does the plan discuss/recommend any facility improvements for employee trip generators?	❑	❑	❑	❑	
	Air, Waterborne and Rail Freight					
170.	Is there an inventory of publicly operated air, waterborne and rail freight facilities provided in the plan?	❑	❑	❑	❑	
171.	Is there an inventory of privately operated air, waterborne and rail freight facilities provided in the plan?	❑	❑	❑	❑	
172.	Is there a statement of compatibility to the municipal capital improvement plan?	❑	❑	❑	❑	
173.	Is there a statement of compatibility to the municipal land use plan?	❑	❑	❑	❑	
174.	Are any improvements made to air, waterborne, and rail freight services discussed in the plan?	❑	❑	❑	❑	
175.	Are any improvements made to Air, Waterborne, and Rail freight facilities discussed in the plan?	❑	❑	❑	❑	
176.	Are any extensions of service discussed in the plan?	❑	❑	❑	❑	
177.	Are any improvements related to these facilities discussed in the plan?	❑	❑	❑	❑	
178.	Are any intermodal enhancements discussed in the pan?	❑	❑	❑	❑	

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